

Rocky Mountain Medical Journal

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Publication Office

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1. Cronheim, G., and Toekes, I. M.: Comparison of Sedative Properties of Single Alkaloids of Rauwolfia and Their Mixtures. Meet. Am. Soc. Pharmacol. & Exper. Therap., Iowa City, Iowa, Sept. 5, 1955.

2. Moyer, J. H.; Denain, E., and Ford, R.: Drug Therapy (Rauwolfia) of Hypertension. II. A Comparative Study of Different Extracts of Rauwolfia When Each Is Used Alone (Orally) for Therapy of Ambulatory Patients with Hypertension. A.M.A. Arch. Int. Med. 96:530 (Oct.) 1955.

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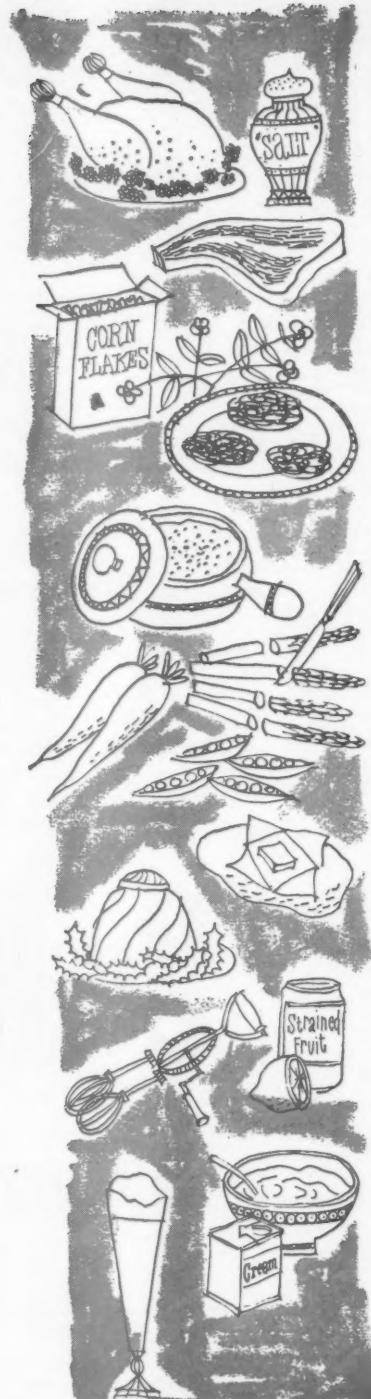
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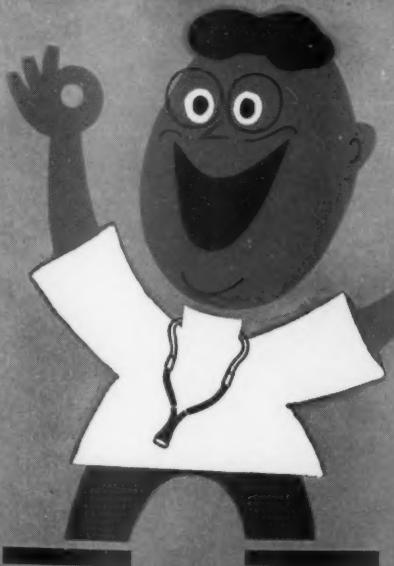
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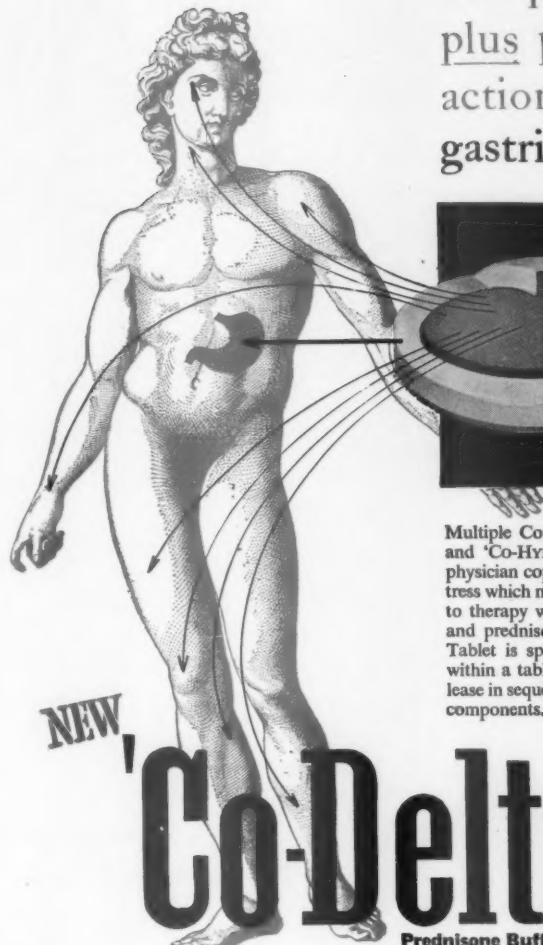
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1. Howell, T.H., et al: Practitioner 173:172 (Aug.) 1954.

*T.M. Reg. U.S. Pat. Off. for chlorpromazine, S.K.F.

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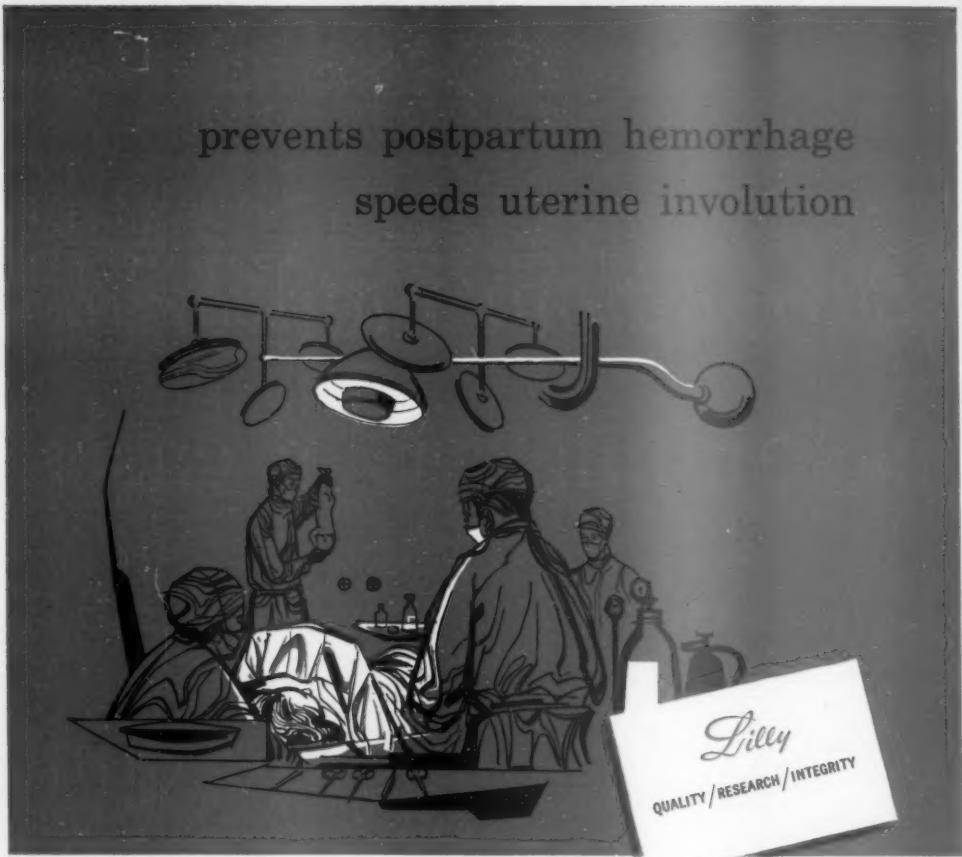
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EDITORIALS

Colorado • Montana • New Mexico • Utah • Wyoming

IN THE first nationwide observance of Medical Education Week, April 22-28, the Colorado State Medical Society has joined with the University of Colorado School of Medicine and other allied medical and health organizations in this area to present a community-wide program of information.

Why A Medical Education Week?

Specifically, Medical Education Week has three functions: (1) to focus national attention on the significance of medical education and the problems of medical schools; (2) to bring home to the public the contributions of medical science to American life, and (3) to foster public interest, through wide public knowledge, in the private support of medical education.

These three goals can be achieved through the use of all media of communication: newspaper coverage and editorials, radio and TV interviews, medical school open houses, and presentations to civic and fraternal groups. These goals will be achieved, however, only if our entire membership comes forth to participate.

These are the facts to be dramatized: the nation's eighty-one medical schools are enrolling and graduating more physicians and providing greater research facilities than at any time in history. Translating these achievements in terms of community understanding, they mean that the United States, largely because of its excellent medical schools, will continue to be the healthiest nation in the world.

In the Rocky Mountain Region the University of Utah and the University of Colorado Schools of Medicine have taken their places as leaders in medical education endeavors at the graduate and postgraduate levels. All physicians in the Rocky Mountain Area should publicize the excellent work of these schools.

We emphasize that Medical Education Week will stress the positive picture of the medical schools' selfless contributions to the American people. In turn, it will overcome the myths and false impressions identifying the schools as the "closed shops" of the medical profession. With the cultivation of an appreciative public, we believe the financial plight of medical education will be eased.

The AMA, the Association of American Medical Colleges, the National Fund for Medical Education, and the American Medical Education Foundation — national sponsors of the week — are providing national promotion through syndicated news features, magazine articles, network radio and TV programs; it is up to our state societies to come out and "sell" the observance locally. Also each county society has its own chairman for Medical Education Week. It is hoped that every physician will acknowledge his gratitude to his medical school by doing everything he can to assist his committee in making a great success of Medical Education Week during April 22-28.

FRANK B. McGLONE, M.D.,
Medical Education Week Chairman for
Colorado.

HUNDREDS of practicing physicians and surgeons have become alarmed during recent years about the attitude of many of our interns, residents, and other young colleagues. Somewhere during the past couple of decades something has slipped. We believe it is a by-product

The Waning of Sense and Senses

of a fabulous economic era and the easy living which accompanies it. The present younger generation of physicians has never known normal times, the value of dollars as we oldsters once knew them, nor the sweat of brain and brawn required to attain economic sufficiency. Many have been reared in families who, unfortunately, have spoiled their youngsters with adulation and too much of the material things. Is it any wonder that within the harvest is a crop of youths whose five senses have missed some training—and who, as young physicians, order up laboratory work, x-rays and other ancillary aids first, leaving sensory acumen until last?

The above evils do not, of course, apply to all youngsters, all parents, and all votaries to our shrine. However, they are so conspicuous that many of us are alarmed. Staff members do not soon forget the courtesy of few or no attendants at conferences prepared on behalf of the intern-resident training programs. Nor do they overlook careless histories, inaccurate observations, or superficial physical examinations.

Articles and editorials upon this subject have appeared in other medical journals during the past several months. One entitled "The Physical Examination" in the February Southern Medical Journal comments upon two unsavory by-products of the tendency to order the ancillary aids in diagnosis before performing a physical examination. One is the lowering of the physician's prestige. The doctor has "downgraded" himself into one who merely reports technical results. Second, costs of medical care have been unnecessarily increased. Last summer (J.A.M.A., August 20, 1955), Howard P. Lewis stated the following, which has since been reprinted in the Journal of the South Carolina Medical Association:

"Somewhere along the line, training in the technic and understanding of physical diagnosis has obviously lagged. Why else would young men who appear to be intelligent and highly educable fail to palpate large livers and spleens? Why would they have difficulty seeing — let alone interpreting—obvious precordial pulsations? Why would they fumble in their attempts at simple neurologic examination, or why would so many have no clear idea of what structures make up the silhouette of the heart as it is seen in the x-ray? These deficiencies I have seen, and they represent only a sample. They occur too often and are emphasized when such men may be found well stuffed with milliequivalents and versed in electrocardiography. Those who underrate the high importance of physical examination in the study of patients declare that the laboratory, the x-ray, and our instruments of precision give us highly desirable measurable findings and information, of course, not otherwise obtainable. With this I agree. However, our modern passion for measurement should not blind us to the fact, which expert clinicians can clearly support, that clinical examination has much to contribute and in many instances far more than any test or device now known."

We wonder when we will again find consistently a crop of young physicians who will spend at least fifteen minutes exercising and training their powers of inspection, palpation, and percussion and auscultation. Jenner's aphorism of over one hundred years ago stated, "More mistakes are made by not looking than by not knowing." The skin and mucosal surfaces are open for our five senses; the ophthalmoscope and the instruments of endoscopy place many areas within direct vision; x-rays verify and interpret physical findings after history and general examination have plotted the course. Despite many instruments of precision, inspection still tells more than all other methods about the central nervous system. Osler once said that the four points of a medical student's compass are: Inspection, Palpation, Percussion and Auscultation. And furthermore, a physician should never cease to be a medical student!

ARTICLES

Effect of Pulmonary Tuberculosis on the Roentgen Shadow Of the Heart*

Lewis G. Jacobs, M.D., and
Bruno Gerstl, M.D.

OAKLAND, CALIFORNIA

THE relationship of pulmonary tuberculosis to heart size has been studied before by both autopsy and radiological observations. The latter have all related a solitary observation of cardiac size to a "normal" table or prediction. Yet the possibility of following the changes, if any, in the heart during life by radiography should be the most potent area for attacking many phases of this problem. To initiate investigation of this point, a review of some of our cases of pulmonary tuberculosis was undertaken. In order that pathological control might be

maintained, we chose to study all cases diagnosed as having pulmonary tuberculosis at autopsy at this hospital between the dates August 6, 1946, and September 1, 1952. Of ninety-seven such men (there were no female tuberculosis beds at this hospital), six were admitted in extremis and died before a chest x-ray could be taken; eight others no longer had records available for review for various reasons. These fourteen were necessarily excluded from further consideration. Tables 1 and 2 summarize the data on the remaining eighty-three.

Of the sixteen patients having only minimal inactive tuberculosis at autopsy, ten

*From the Veterans Administration Hospital, Oakland, California.

TABLE 1
The Clinical Status of 83 Patients With Tuberculosis

1. AUTOPSY DIAGNOSIS ONLY: NO CLINICAL EVIDENCE OF TUBERCULOSIS			
Total	With diseased, enlarged hearts	With normal hearts	With cardiac atrophy
16 cases	10 cases coronary disease 4 cases rheumatic disease 1 case hypertensive or arteriosclerotic 5 cases	4 cases	2 cases*
2. CLINICALLY ACTIVE TUBERCULOSIS, PROVED AT AUTOPSY			
Total	With diseased, enlarged hearts	With normal hearts	With cardiac atrophy
67 cases	24 cases myocardial tuberculosis 1 case pericardial tuberculosis 4 cases pericardial effusion 4 cases coronary disease 5 cases rheumatic disease 2 cases hypertensive or arteriosclerotic 7 cases chronic nephritis with heart disease 1 case	40 cases **	3 cases **

* Both with terminal cancer.
** See Table 3.

TABLE 2
Distribution of 83 Male Patients With Regard to Age and Race

Age	A. 67 With Active Lesions			B. 16 With Inactive Lesions	
	White	Negro	Other	White	Negro
21-30.....	1	12	0	0	0
31-40.....	6	2	0	0	0
41-50.....	6	4	2*	0	0
51-60.....	25	1	0	5	0
61-70.....	5	0	0	4	1
71-80.....	2	0	0	6	0
81-90.....	1	0	0	0	0

* 1 Filipino, 1 Eskimo.

had diseased hearts—a very high proportion. But since all ten had been admitted and treated primarily for cardiac disease this cannot be taken as significant. The presence of a healed focus in a few of our many older cardiac patients is only to be expected. Two patients showed cardiac atrophy of considerable degree; these both were admitted for and died from terminal cancer. The transverse diameter of the heart decreased from 142 mm. to 116 mm. in seventeen months in one, and from 149 mm. to 126 mm. in two months in the other. In both the tuberculosis was old quiescent disease; in the one fairly extensive and in the other microscopic only. It does not seem likely that the terminal cardiac atrophy was related to this quiescent tuberculosis; it is much more probable that the cachexia of cancer was the primary cause.

The twenty-four patients with clinical and autopsy evidence of both active tuberculosis and cardiac disease (Table 1) fall into two groups. Those with heart conditions directly due to tuberculosis include the case with tuberculosis of the myocardium and the four cases of tuberculosis pericarditis. The second group includes the fifteen patients with coincident heart disease and tuberculosis. This fairly common combination has been well discussed by both Schmidt⁸ and Berblinger². Berblinger makes a special point of the danger of overlooking heart disease in persons with diagnosed tuberculosis, because of the similarity of some of the symptoms of cardiac disease to those of tuberculosis. Of our two cases of rheumatic heart disease and tuberculosis, one had mitral stenosis, but of slight degree only; the other had a rheumatic myocarditis. There was no evidence that the tubercu-

losis had any observable effect on the diseased heart. Four patients found to have small amounts of pericardial fluid at autopsy with no clinical manifestations might be classed in either group, according to viewpoint; since the fluid might have resulted from agonal changes, our preference would be to class them in the second.

The distribution of the heart size of the forty-three patients with clinically normal hearts and pulmonary tuberculosis (in standard deviations from prediction) follows reasonably closely the expectation, considering the small size of the group (Table 3). The prediction is that based on a formula using height, weight, age, transverse diameter of the chest, and length of the aerated lung column, which was derived from a group at this hospital and therefore serves as a control insofar as heart size determination is concerned⁴. The general grouping would suggest that these patients come from the same population as the hospital group—the slight preponderance of negative values is not large enough to be significant. The autopsy surgeon made a diagnosis of cardiac atrophy, in seven of these and in two he made a diagnosis of right sided hypertrophy. The atrophy was slight in all cases, and the weights of all of these hearts widely overlapped the range of the "normal" hearts. The seven ranged from a minimum of 200 gms. to a maximum of 310 gms. One patient who had a very marked decrease in heart size roentgenologically (from 124 to 101 mm. in six months) had at autopsy a heart described as normal, weighing 360 gms., with a left ventricular wall 12 to 15 mm. thick. Evidently the "atrophy" on x-ray study had little relation to the quantity of heart muscle!

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TABLE 3
Deviation From Prediction in Standard Deviations For 43 Patients With Tuberculosis But No Heart Disease

Deviation from prediction in standard deviations (Sigma)	No. of patients
+2 to +3.....	1
+1 to +2.....	5
-1 to +1.....	25
-1 to -2.....	9
-2 to -3.....	3

The two cases (4.7 per cent of the group) showing right sided hypertrophy both had advanced tuberculosis of the lungs and of many other organs. One also had microscopic pulmonary emphysema. The roentgen size of the heart was small normal in both (about $1\frac{1}{2}$ sigma from prediction). The EKG of one showed "possible myocardial damage and/or digitalis effect" six months before death, while ten days before death an EKG showed only low R-wave voltage. Clinically this man had a terminal cor pulmonale. The other—the one with microscopic emphysema—had two EKGs in the week before death, showing auricular flutter with a 3:1 block, and right ventricular preponderance. At autopsy the weight of both these hearts was within normal range. While the hypertrophy of the right heart was most likely related to the very extensive lung destruction with possible secondary lesser circulation hypertension, changes were slight in the face of extreme pulmonary disease. Since the roentgen changes are not such as to be diagnostic, the electrocardiographic changes are usually slight, and the clinical picture not always characteristic, diagnosis during life is generally impossible except in the most severe cases, and then on a clinical rather than radiological basis.

Only one instance was considered for left sided hypertrophy that could by any stretch of the imagination be ascribed to tuberculosis as such. This patient was diagnosed by the autopsy surgeon as "toxic myocarditis" but the only definite finding was microscopic edema of the connective tissue septa. This heart weighed 270 gms., which is the lower limit of normal and had a transverse diameter on the x-ray of 121 mm. against a prediction of 130 mm. This single

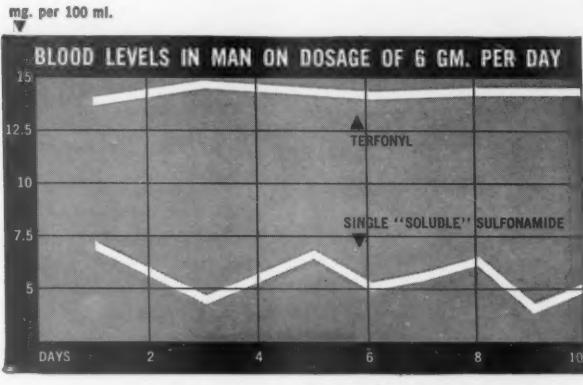
case, with possible toxic myocarditis, is therefore not one of enlargement or hypertrophy.

With regard to the question of size change under observation, it was our original hope to supplement the work reported by studying a number of current cases over some years to evaluate both the size changes, *per se*, and the possibility that there might be some difference between regressive and progressive disease in the effect on the heart. However, when it came to obtaining a series, we discovered that practically all of the patients available to us had been treated by pneumoperitoneum, with secondary elevation of the diaphragm. This in turn made any accurate comparison of heart size impossible. We had therefore to limit ourselves to the autopsy group of forty-three apparently normal hearts with progressive pulmonary tuberculosis. Unfortunately, only fifteen of these patients had x-ray observations over a period of a year or more available for study. In evaluating the findings, the complication arises that the weight change of the patient causes a change in his heart size prediction. This makes it necessary to evaluate the deviation from prediction rather than the absolute heart size if atrophy and hypertrophy as distinguished from size changes due to weight changes, are to be studied. Table 4 lists the changes in the deviation for these fifteen cases. Of the three cases showing material increase, one was found at autopsy to have a "flabby" heart weighing 300 grams, one had a "normal" heart weighing 280 grams, and one had a "normal" heart weighing 240 grams. The measurements in this last case are of doubtful validity, since advancing disease partly obscured both the right border of the heart and the exact position of the diaphragm on the last film. The case showing a marked roentgenological decrease in size had at autopsy a "small" heart weighing 240 grams, and 10 c.c. of pericardial fluid. Although this might have been considered a case of atrophy in spite of the pathologist's opinion to the contrary (since the patient's body weight had decreased from $172\frac{1}{2}$ pounds on entry to 110 pounds at autopsy, while the heart diameter had decreased from 125 to 105 mm., even more

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rapidly) in contravention of this idea, a terminal pneumoperitoneum interfered with both measurement and prediction of heart size on the last film. This strongly suggests that the observation was an artefact due to the pneumoperitoneum.

The effect of emphysema should not be overlooked. Berblinger² thinks that emphysema usually leads to right sided hypertrophy, even though this may be of minimal extent. Ackerman and Kasuga³ consider one of the common causes of right sided cardiac hypertrophy chronic tuberculosis of long duration with secondary emphysema. The development of compensatory emphysema should tend to aggravate right hypertrophy, and emphysema rather than tuberculosis may sometimes be the primary cause of lesser circuit hypertension. Table 5, a grouping of our patients according to heart size and the presence of emphysema, shows no difference in heart size as between the emphysematous and non-emphysematous patients. Of the two patients with right hypertrophy at autopsy, only one had significant compensatory emphysema, but both had very advanced pulmonary tuberculosis. In passing, it is well to note that the correlation between x-ray signs of emphysema and pathological signs of emphysema was poor, even when one or the other was noted as severe. While this might be due in part to poor observation, it is not entirely explained by the evidence obtained in this study.

Possible effects of tuberculosis on the heart are listed in Table 6. The first two items on this list are not uncommon entities. The roentgen diagnosis of myocardial tuberculosis is hardly possible. In tuberculous pericarditis roentgen study has a well de-

TABLE 5
Relation of Emphysema to Heart Size

Deviation from prediction (Sigma)	No. of patients	No. with emphysema	Per cent with emphysema
+2 to +3	6	2	33±19*
-2 to +2	25	7	28±9
-3 to -2	13	5	39±13
TOTAL	44	14	32±7

*Standard deviation of the percentage.

fined role. Neither condition is pertinent to our subject, so this discussion will be confined to the other four.

The most encyclopedic study of the heart in tuberculosis is the monograph of Berblinger². As this opus is based on pathological studies only, it is not strictly comparable to x-ray studies. It is nevertheless worth noting that Berblinger thinks that right sided hypertrophy of the heart is not a regular or usual finding in pulmonary tuberculosis. Although about a quarter of his series of 115 cases showed an unusually small heart, he could not clearly relate this finding to tuberculosis. He states he was unable to distinguish pathologically between atrophy and hypoplasia. He found that cachexia generally led to little change in heart size or weight or to its functional index. The best purely roentgenological study is that of Schmidt⁸. He concludes only: "The

TABLE 4
Changes in Heart Size During Observation of a Year or More

Change in the deviation from prediction	No. of Cases
increased over 3 cm.....	1
increased 2-3 cm.....	2
increased 1-2 cm.....	1
changed less than 1 cm.....	9
decreased 1-2 cm.....	1
decreased 2-3 cm.....	1
TOTAL.....	15

TABLE 6
Possible Effects of Tuberculosis on the Heart

1. Tuberculosis of the myocardium.
2. Tuberculosis of the pericardium.
3. Decrease of heart size in tuberculosis.
 - (a) Due to "build," "diathesis," or "congenital type."
 - (b) Due to muscle atrophy from disuse, bodily atrophy, or asthenia.
 - (c) Due to toxic atrophy.
4. Increase of heart size in tuberculosis.
 - (a) Right hypertrophy from lesser circuit hypertension or vascular obstruction.
 - (b) Changes due to compensatory emphysema.
 - (c) Left hypertrophy from toxic or other cause.
5. Coexistent but otherwise unrelated heart disease and tuberculosis.
 - (a) Without evidence of heart change from the tuberculosis.
 - (b) With evidence of heart change from the tuberculosis.
6. Overlapping and mixed conditions.



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*Clinton, M., Round Table Discussion: New York J. Med. 54:481, 1954.
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complex problem of interrelation between heart pathology and tuberculosis infection of the lungs still lacks a satisfactory solution." He does, however, make one very significant point: the apparent small heart is materially related to the degree of rotation of the heart, which in turn may be affected by fibrosis, emphysema, pleurisy, and other complications of tuberculosis. This undoubtedly is the explanation for our case whose heart size on x-ray decreased even though he had a rather large heart at autopsy. Sweeney⁹ feels that small size, when present, is due to muscular atrophy in most cases, while Hawes³ found the heart normal in most tuberculous in his series. Porter and Gordon⁷ found little effect, although the heart size in their patients tended to be a little larger than predicted by the Hodges-Eyster formula; this might have been an effect of the altitude, since their patients lived at 6,000 feet above sea level. King and Hansen⁸ report the only group of tuberculous with hearts averaging smaller than normal, but their statistical studies are defective in that the height-weight grouping of their cases differs from that of Groedel, with whose tables they compared their patients, in such a way that it might have produced the observed difference in heart size. Of great importance in evaluating the problem is the observation of Morris and Jacobs⁶ that in 92 per cent of cases the shape of the heart can be correlated with the somatotype.

It seems, therefore, that no clear-cut relation or set of relations, between heart size in x-ray and pulmonary tuberculosis has emerged either from previous studies or from our data. Occasional atrophy or right hypertrophy can be evaluated only as complications. They produce little change in the cardiac contour or size, except in the presence of heart failure. Such failure due to right hypertrophy is the exception. Pulmonary insufficiency is a more common

terminal event in tuberculosis. The large number of senescent patients in our hospital explains the undue proportion of cases with coexisting but unrelated heart disease and tuberculosis. The question whether pulmonary tuberculosis, of itself, ordinarily causes change in heart size seems to be answered conclusively in the negative.

Conclusions

1. Pulmonary tuberculosis does not, of itself, ordinarily produce any change in the heart size, especially as observed on the roentgenogram. (Changes in myocardial and pericardial tuberculosis are not due to the pulmonary status.)

2. Atrophy and right heart hypertrophy do not have any consistent relationship to pulmonary tuberculosis. They occur only as complications.

3. There is no evidence that "hypoplasia" or "congenitally small heart" is more common in tuberculous patients than in a similar non-tuberculous hospital group.

4. No marked effect on the x-ray appearance of the heart results from the degree of emphysema commonly seen in tuberculosis.

5. Cardiac rotation due to pulmonary fibrosis or other changes may lead to a false impression of cardiac atrophy if the x-ray size only is studied.

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ATOMIC MEDICAL CONVENTION

The Oklahoma City County Medical Society is sponsoring the first Atomic Medical Convention to be held on a purely nuclear basis, April 21, 1956. Featured will be the Atoms for Peace exhibit of the United States government, which

was exhibited in Geneva, Switzerland. This will be the only public showing of the exhibit in the United States.

Dinner speaker will be Dr. Dwight H. Murray, President-Elect, American Medical Association.

*Results in Psychiatric Treatment**

C. H. Hardin Branch, M.D.

SALT LAKE CITY

IT SHOULD NOT be necessary to discuss in any detail the results of psychiatric treatment, *per se*, since extensive educational campaigns have been carried on in this field. In view of this, it is surprising that many lay and some professional persons continue to display faulty knowledge of the processes involved and the results to be expected. There is unrealistic pessimism about some aspects and equally unrealistic optimism about others.

Nor are psychiatrists blameless in the production of these confusions. We are sometimes defensive about what we do not know, we sometimes imply that psychiatric treatment procedures have to be understood before treatment results can be scientifically evaluated, and we sometimes infer that results in the treatment of psychiatric illnesses do not lend themselves to categorization in the same terms as those used in other illnesses.

It is the author's opinion that discussion of some of these points may lead to better understanding of our common problems, more definitive and efficient handling of psychiatric cases, and consequent improvement in existing treatment results.

First in importance there is the problem of the appraisal of the results of psychiatric treatment. In all illness there are symptoms—usually responsible for bringing the patient to the physician—and underlying pathological processes either related etiologically to the symptoms or detected as the physician searches for ways of alleviating the symptoms. The physician may, quite justifiably, direct his efforts toward one of several possible goals:

*Presented at the Wyoming State Medical Society Meeting in Laramie, June 13, 1955. From the Dept. of Psychiatry, University of Utah College of Medicine.

1. Direct alleviation of symptoms.
2. Alleviation of symptoms by treatment of the underlying disease process.
3. Direct attack on the disease process (ignoring the symptoms) in an attempt to eradicate it entirely or to prevent the development of more serious difficulties.

In practice the actual goal will be some combination of these three, and the treatment results will obviously be assayed in terms of the direction of the physician's effort.

This undoubtedly seems banal enough as applied to medical practice in general, but it may not be recognized that the psychiatrist may elect his therapeutic goals and evaluate his results according to this same schedule. For example, a psychiatrist might in one case be satisfied by the disappearance of the anxiety which was the presenting symptom; in another he might feel that the mere absence of symptoms at any one time was unimportant, since his primary concern would be with the underlying pathology. And, like other physicians, the psychiatrist may see reasons for concern in a clinical picture which appears relatively benign to the patient and his family.

Second, there is the matter of the treatment results themselves. What can the physician tell his patient about results to be expected from psychiatric treatment? This will depend upon the nature of the illness and may even be appreciably altered by the understanding and expectations of both the physician and the patient. In psychiatry as in other medical fields illness may be acute or chronic, mild or severe, incapacitating or mildly bothersome. Some respond to treatment with little if any tendency to recur; with others, recurrence is the rule rather than the exception.

For the psychoses, the involutional psy-

chotic reaction justifies the best prognosis. In these patients approximately 80 per cent can be expected to recover completely and permanently with treatment. The patient with manic depressive psychotic reaction has about an equal, if not somewhat better, chance of recovering from the immediate attack; but recurrence is fairly common. In the schizophrenias it is probable that some patients are hopelessly ill from the start, while others respond well to treatment. For the total group, however, the chances of recovery are 60 to 70 per cent with 20 per cent recurring.

For the psychoneuroses, the statistics for the entire group are not as clear cut, but it is probable that 50 to 75 per cent of adequately treated patients recover completely or sufficiently to satisfy them and their therapists. In some conditions such as the character disorders, including alcoholism and addiction problems, the prognosis includes the motivation of the patient as well as the treatment process itself, since no one has yet been able to force psychotherapy on a reluctant patient.

As indicated above, one should be careful in discussing anticipated results with the patient and his family to take into consideration their expectations. It is not true that every mental illness will inevitably result in permanent significant damage, but it is equally fallacious to expect that a person who has recovered from a mental illness will necessarily have replaced all his human sins and frailties with virtues and strengths. Psychotherapy will no more automatically "cure" undesirable qualities, unpleasant though they may be, than a cholecystectomy will automatically "cure" a tendency to overeat.

Hopefully, a realistic approach to the problem can help improve treatment results, and here the physician and surgeon have an extremely important role to play. Theirs is the responsibility to see that the patient gets adequate help early in the illness and that the patient's family have sufficient understanding to cooperate effectively with whatever treatment procedure is indicated.

At this point someone usually mentions

the difficulties of referring a patient for psychiatric treatment, the stigma attached to mental illness and other obstacles of this sort. Given adequate orientation on the part of the physician or surgeon—usually the first to see the mentally ill patient—these difficulties should be no greater than others commonly encountered in the practice of medicine. Certainly there are patients who "do not want to see a psychiatrist" or who "hate hospitals," just as there are patients who "hate shots" or who "can't stay on a diet" or who "won't stay in bed." But the patient's distaste for a therapeutic procedure does not release the physician from the responsibility of prescribing it for him and of pointing out the possible consequences of his failure to follow the doctor's advice. Actually, the physician's own conviction in the correctness of the suggested procedure—whether it be medication, surgery, hospitalization, or psychiatric evaluation—is necessary to the frightened patient. The patient who is reluctant to see a consultant, of any sort, may have picked up this attitude from the physician who is reluctant to suggest the consultation.

The psychiatrist, for his part, has a responsibility in promoting an optimum consultative relationship by seeing to it that his appraisal of a patient is realistic and understandable. One gains the impression that some psychiatric reports are couched in such esoteric jargon that they mean little to the referring physician and, consequently, to the patient. Mere detailing of contributory elements in the past history of a patient, or labeling aspects of his psychopathology may make interesting reading for the referring physician; but unless these data lead to better understanding or are accompanied by some practical suggestions as to future planning, the value is likely to be nebulous.

An important point which sometimes applies is the possibility of reassuring the patient—and the referring physician—that the symptoms, while more or less troublesome, are not dangerous and can be tolerated without inordinate discomfort or loss of efficiency. An extreme example in our clinic was a young lady who complained that she became nervous while engaging in public

speaking; in her case it was sufficient to point out that many a speaker's stand, even at professional meetings, concealed a pair of shaky knees, and that greater experience rather than psychotherapy would be useful to her.

Treatment of psychiatric illnesses, though not always convenient, is always available, and the results to be expected can and should be stated as clearly as possible; the uncertain and poor as readily as the certain and good. That some conditions require long treatment by highly specialized persons is a fact, unpleasant to all of us, but nonetheless a fact. This is true in all of medicine, and our responsibility simply requires us to make every practical effort to see that the patient receives the necessary treatment, or when this is impossible, to do the best we can with whatever is available.

In some instances the physician or the surgeon is in the best possible position to provide the necessary psychotherapeutic help. With some understanding of basic psychodynamics now as much a part of medical education as are the fundamental facts of other aspects of biological functioning, any physician should be prepared to help the patient understand the historical development of his symptoms, the emotional aspects of his illness, and the more obvious elements in his unrealistic behavior patterns. After all, good three-dimensional history taking demands some appreciation of these matters. And the opportunity provided the patient to talk freely to an interested and objective physician is psychotherapeutic in every sense of the word. When the emotional elements are especially prominent, linking historical events in everyday living with the appearance of symptoms should not be difficult and can be helpful. The psychiatric consultant may be able to work constructively with this process by suggesting areas for closer scrutiny by the patient and his physician.

The objection that this kind of activity is too time-consuming for a "general office practice" does not seem particularly valid. For one thing, certain therapeutic procedures simply take more time than others, and the physician is justified in adjusting

his fees accordingly. The length of some surgical procedures does not, *ipso facto*, exclude them as proper treatment. For another thing, the fifty minute interview in common use in psychotherapy as practiced by psychiatrists is not necessarily mandatory for psychotherapy as practiced by the physician whose relationship with the patient is on a somewhat different basis. Every physician can name patients who gain a great deal of benefit (in support, reassurance, and understanding) from repeated fifteen to thirty minute office visits, particularly after adequate relationships have been established. This is obviously not a type of psychotherapy which can be applied indiscriminately to all kinds of mental illness, but it is a type of psychotherapy which can be made available to many persons with emotional difficulties without apologies from the physician and often with demonstrable benefit to the patient.

It is by the improvement of our communication with each other, clear cut acceptance of our responsibilities, and optimum utilization of our contributions to the total problem of the patient that we hope to improve the results to be obtained from psychiatric treatment.

Conclusions

1. The results of psychiatric treatment can and should be evaluated against the same criteria as those used for other medical treatment.

2. Treatment can be instituted earlier and more effectively through better orientation of the patient and his family, enlisting their cooperation by a factual consideration of the results to be expected from treatment.

3. The psychiatric consultant can aid in this process by a pragmatic approach to the total problem of the patient, including realistic planning for proper treatment.

4. In some cases the relationship already existing between the referring doctor and his patient may offer an excellent atmosphere in which psychotherapy can be carried on. In these cases the psychiatric consultant's usefulness lies in evaluation of the problem and suggestions as to a course of action rather than in actively carrying out the treatment himself.

Constrictive Pericarditis*

James R. Leake, M.D.

DENVER

A CASE of constrictive pericarditis, successfully operated upon, with excellent objective improvement, and fair subjective improvement will be presented. The clinical entity of constrictive pericarditis will be discussed, particularly as it applies to this case.

Historical Background

Galen, in 160 A.D., first described this condition in a rooster. Lower, in 1669, first described the disease in man. An accurate analysis of the mechanism of constrictive pericarditis was made by Chevers in 1842. Surgery was first suggested in 1895 by Weill and Delorme. In 1896, Pick gained wide recognition for his evaluation of constrictive pericarditis. The first successful pericardectomy was performed by Churchill in this country in 1928. Many series of operated cases have since been reported. Approximately, 70 per cent of operated cases were helped by surgery so that the expected invalidism and early deaths were prevented.

Definitions

Chronic constrictive pericarditis is a thickening of the pericardium, with or without calcifications and with complete or partial obliteration of the pericardial cavity, which interferes with the mechanical efficiency of the heart, producing signs and symptoms similar to those seen in ordinary heart failure. Panzerherz, coeur en cuirasse, and pericarditis calculoso are apt expressions for those cases of constrictive pericarditis which become calcified. Sub-types of constrictive pericarditis include concretio cordis in which there are adhesions between the layers of the pericardium, and accretio

cordis, in which there are adhesions between the pericardium and the surrounding tissues. Broadbent's sign is seen only in cases of accretio cordis.

Etiology

All authors agree that the most common cause of chronic constrictive pericarditis is a preceding tuberculous infection. Five of twenty-seven cases of acute tuberculous pericarditis reported by Colonel Goyette at Fitzsimons developed constrictive pericarditis. Rheumatic origin is considered unlikely or impossible by most authors. A few cases may follow pyogenic pericarditis. A rare case may follow cancer metastases to the pericardium.

Symptoms

Whether concretio or accretio in type, the symptoms are the same and are the result of the decreased output and increased venous back pressure from the confined heart. Dyspnea on exertion is the earliest and most common symptom. Swelling of the abdomen followed by swelling of the ankles is found in two-thirds of the patients. In other causes of right heart failure, ankle edema precedes ascites and liver engorgement. Less frequent symptoms include tiredness, weakness, cough, left chest pain, swelling of the face and tightness of the neck.

Signs

The signs of ascites, a non-pulsatile, non-tender but enlarged liver, peripheral edema, and venous engorgement most noticeable in the neck and face, correspond to the symptoms mentioned above. In addition, cyanosis is present in one-half of the cases, while jaundice is usually absent. The blood pressure is low, with systolic pressure under 100 mm. of mercury in one-third of the patients. The pulse pressure is small, being less than 30 in one-half those affected.

*Presented at the regular scientific meeting of the Denver Medical Society on November 1, 1955, from a case treated at the Denver Veterans Administration Hospital.

During inspiration in a normal person, there is usually a two to three millimeter increase in the pulse pressure reflecting the effect of a more negative intrathoracic pressure (i.e., a stronger vacuum) producing increased cardiac filling, cardiac output, and pulse volume. In constrictive pericarditis, the blood within the great veins (venae cavae and pulmonary veins) finds it easier to swell the walls laterally toward the increasing vacuum, than to enter the rigid positive pressure chambers of the heart. Inflow decreases, output decreases, and the pulse becomes smaller—therefore being paradoxical as compared to normal.

The heart size is frequently normal or small, unlike the heart size in ordinary failure. The point of maximum impulse is not palpable usually; but if found, it remains fixed on change of position of the patient. When the patient's body demands increased oxygen during exercise, a marked tachycardia develops since there is no other method of increasing cardiac output. Tachycardia fails to make up the deficit completely, however, so that increased amounts of oxygen are removed from the blood, and cyanosis appears or is intensified. Auricular fibrillation is present in one-third of the patients. Murmurs are rare.

Venous pressure is over 200 mm. of water in 50 per cent of the patients and over 100 in 90 per cent. Arm to tongue circulation time is prolonged. Vital capacity is normal unless pleural effusion is present. Blood volume is normal or increased.

Electrocardiograms

Harrison and White found low voltage in 60 per cent of their cases. T waves were low, flat, or inverted in 100 per cent of Evans' and Jackson's cases. They also remarked on notching of the P waves in 50 per cent. Stewart notes that change of position of the patient produces little or no change in the electrical axis. In a normal individual the tallest T wave in the chest leads is usually found to the right of the tallest QRS complex, since, as some postulate, the repolarization wave is produced after the heart has rotated to the right during systole. Perhaps in our case of constrictive pericarditis the tallest T wave was in the same chest

lead as the tallest QRS complex, because the heart was prevented from rotating.

Cardiac Fluoroscopy

On fluoroscopy, the heart is noted to be amazingly inactive. Calcifications may or may not be seen. In cases of *accretio cordis* the heart will be fixed in its position as the patient leans to the left and to the right. In *concretio cordis*, the heart is not fixed but it will be noted to maintain its original shape. Pleural effusions may be seen, but pulmonary congestion is unusual.

CASE REPORT

Chief Complaint: Shortness of breath of six years' duration, with swelling of the abdomen and legs during the last six months.

Present Illness: The patient, a 31-year-old white, married male bus driver, was in essentially good health until 1948. At that time, while living in Colorado at an altitude of 7,500 feet, he first noted exertional dyspnea. In 1949, seeking a place where he could breathe well enough to drive a bus, he moved to Kansas where his symptoms subsided temporarily. In 1951 the patient had a short febrile illness associated with abdominal discomfort and jaundice, but no anorexia.

During the next two years his dyspnea became worse, again threatening his job, and orthopnea gradually developed. Early in 1954 he noted abdominal swelling and weight gain, followed later by swelling of the ankles.

Past History: A vague history of a respiratory infection in 1938 was all that could be elicited. There was no history of cardiac or joint disease and no family history of tuberculosis.

Physical Examination: The patient was a well developed and nourished male with mild icterus and cyanosis and a striking venous engorgement of the face and neck. Blood pressure was 115/85, pulse 80 and regular. The heart was not enlarged to percussion. A point of maximum impulse was not discernible. There were no murmurs. The lungs were clear. The abdomen was rounded, with shifting dullness present. A tender liver edge was palpated just above the iliac crest. There was a 4-plus pitting edema of the lower legs.

Laboratory Data: Serology and urinalysis and CBC were normal. Total serum proteins were normal. Liver function tests were consistent with the mild congestion found on liver biopsy.

X-ray and Other Data: A chest x-ray revealed cardiac enlargement, mildly congested lung fields, and early hydrothorax, bilaterally. Cardiac fluoroscopy showed diminished ventricular contractions. Venous pressure was 230 mm. of water and arm to tongue circulation time with Decholin® was 23 seconds. An electrocardiogram

was abnormal in that T waves were either low or inverted, and the voltage was low.

Clinical Course: On a low salt regime with digitalization and diuresis, the patient's weight dropped 44 pounds in three months. He was transferred to a Denver hospital for further evaluation and treatment.

At Denver, the previous physical, laboratory, and fluoroscopy findings were substantiated. An average of forty-five blood pressure readings was 100/69, giving a pulse pressure of 31. The pulse was paradoxical, diminishing noticeably on inspiration. A PPD No. 1 skin test was negative. Sputum cultures for acid-fast bacilli were negative. An electrocardiogram taken in three different postures showed no change in the shape of the QRS complexes.

Leaning the patient to the right and left during fluoroscopy, it was possible to slightly displace the heart. Our clinical diagnosis of constrictive pericarditis was substantiated by the data obtained during cardiac catheterization.

On December 9, 1954, the patient was operated upon from a left subpectoral approach, and the heart was found to be encased in a fibrous capsule six to eight millimeters thick. When the capsule was incised, the heart began herniating through the opening and contracting more vigorously. A total area of approximately 40 square centimeters of pericardium was removed. Microscopic examination showed no calcification or evidence of tuberculosis.

Following surgery eleven blood pressure recordings averaged 115/70, giving a pulse pressure of 45. Venous pressure dropped from 300 to 140 mm. of water. Arm to tongue circulation time with Decholin decreased from 40 to 16 seconds. Arm to lung circulation time with ether decreased from 15 to 6 seconds. Lung to tongue circulation time, therefore, dropped from 25 to 10 seconds. The liver size diminished from five to three fingerbreadths below the right costal margin. Facial engorgement, cyanosis, and icterus disappeared. The patient's total blood volume did not diminish significantly. All of the patient's medications (digitalis, quinidine and Combiotic®) were discontinued and he was discharged for three months, at which time he was recalled for re-evaluation.

Postoperative Admission: On questioning, he was still "peppless and weak" and could work only three to four minutes at a time in his garden. He could walk only one and a half blocks at a normal pace. (He was able to walk but one-half block pre-operatively.)

Objectively, the patient did not appear in distress. The neck veins were not distended; the heart was not enlarged. The liver was down only two fingerbreadths. There was no ankle edema.

Routine laboratory work was not remarkable. Chest x-rays showed no hydrothorax, but did show prominence of pulmonary artery. Normal

cardiac ventricular activity was noted on fluoroscopy. Repeat cardiac catheterization revealed that the patient's hemodynamics were definitely improved. EKG's showed better voltage and now showed the tallest T to the right of the tallest QRS in the chest leads.

On September 6, 1955, nine months after surgery, the patient returned once more. He had gained 13 pounds. His exercise tolerance had improved slightly. Physical examination was unchanged from that of five months earlier. Venous pressure was even lower and circulation times remained within normal limits. It was recommended that the patient return to limited work.

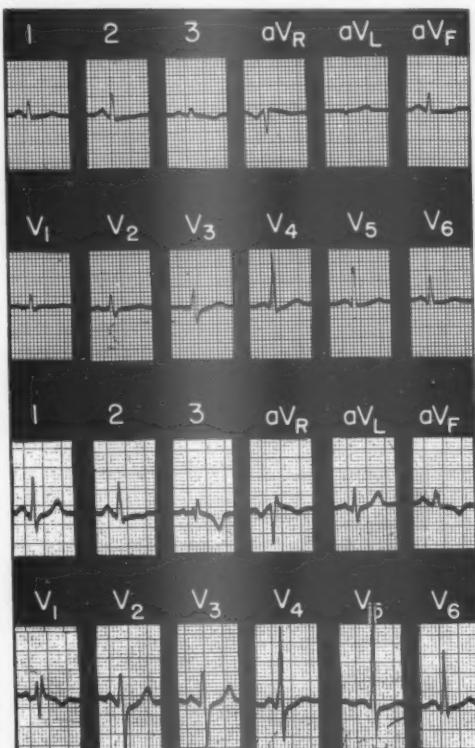


Fig. 1. Electrocardiograms showing improved voltages postoperatively, and also the shift to the right of the tallest repolarization wave —indicating that the heart is now free to rotate during systole.

Discussion

The patient we have described presented a classical picture of constrictive pericarditis in his symptomatology and in his physical and laboratory findings both pre- and post-operatively. Immediately after surgery, he had striking objective improvement. However, his less than expected subjective improvement was disturbing.

There are several good organic reasons why a patient might not return to normal physiologically: 1. In any long neglected case of constrictive pericarditis, there might be permanent liver damage. 2. The disease which produced the original pericarditis may also produce a superficial myocarditis and later fibrosis. These factors, together with 3. the long period of relative disuse, could produce a permanently weakened myocardium. 4. Some successfully operated cases have required reoperation because of the regrowth of a constrictive sheath.

There was good evidence that none of these factors was in operation in this instance. We expect the patient to maintain his excellent objective improvement, and we hope that he will show further symptomatic improvement. A low salt reduction diet will help to ease the present work load on his myocardium and psychologic support and reassurance will help to reduce his understandable dependency.

Surgery has been shown to help over two-thirds of the patients with chronic constrictive pericarditis. For the remainder, a fatal

outcome can still be expected. Prevention of the disease would seem to be the only method of further reducing deaths. Since most cases follow tuberculous or pyogenic pericarditis, perhaps a program of combined antibiotic and corticoid therapy would prevent formation of a fibrous constrictive sheath.

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Jaundice From Chlorpromazine (Thorazine)*

G. Paul Smith, M.D., and
Lynn A. James, M.D.

GRAND JUNCTION, COLORADO

OBSTRUCTIVE jaundice during or after Chlorpromazine is not an infrequent finding: (1/5 of 1 per cent¹ to 5% of 1 per cent² up to an isolated increased incidence of 16% per cent² in reported cases). Laparotomy has occasionally been necessary; three such cases are reported by Lemire and Mitchell¹. Jaundice, a side effect to this drug, has usually been benign and of short duration. However, some patients exhibit deep icterus and more sustained effects which cause concern in regard to various obstructive

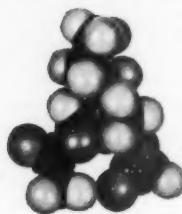
mechanisms. Such experience obtained in the case herein presented.

CLINICAL ABSTRACT

A 58-year-old woman entered St. Mary's Hospital July 19, 1955, with the complaints of one-half hour of severe right sided backache and a progressive yellow skin. She had spent April and May in the South with a newly acquired husband and relatives. The marriage failed and she was sent home. During her first month in the South, she ate a great deal of greasy foods which she tolerated poorly. After returning home from this short marriage, she took Thorazine tablets, 25 mgs. TID, from May to July 1, approximately six weeks, for emotional tension.

A brief episode of right sub-costal pain and backache lasted for two hours on June 22, 1955. Shortly after arriving in California for a vacation, July 1, she developed a severe headache

*We wish to express our gratitude and appreciation to E. A. Jaros, M.D., for allowing us to observe his patient and giving us a complete report of laparotomy; also to Geno Saccomanno, M.D., for pathological study and advice.



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LABORATORY STUDIES

Day from onset of illness.....	20	25	30	38	45	77	83	150
Icterus Index.....	84	74	42	40.9	33	11		6.3
Serum Bilirubin-Direct.....					1.7			
Total					2.3			
Alkaline Phosphatase.....	15.2				16.5		15.8	8.1
Prothrombin Time.....	93%				100			
Thymol Turbidity.....	2 units				2 units			
C.C. Floc.....	Neg.				Neg.			

and during the next four days, chills and fever. A local physician gave her antibiotics with improvement in her febrile course. She stopped the Thorazine tablets at the onset of this acute illness. From July 3 she began to suffer from anorexia, nausea, and vomiting. By the sixth day her urine was dark, stools pasty, her skin itching and yellow. Treatment for rectal impaction relieved constipation on July 15. She returned to Grand Junction, Colorado, at about that time. On the day of admission to the hospital her right back ached similarly to that suffered on June 22.

On July 20, x-ray study of the abdomen with special reference to the right upper quadrant: "Reveals no abnormal calcifications in the region of the gallbladder. The hepatic shadow appears to be enlarged. The renal and splenic shadows appear to be within normal limits. There is a moderate amount of gas in the colon with no small bowel distention."

Urine contained bile on July 20 and an average amount of urobilinogen on July 25. Urinalysis showed a low specific gravity of 1.003 to 1.008 during hospitalization as well as a negative sugar, negative albumin and only a few pus cells noted. Admission lab.: RBC 4.10, WBC 5,000, hemoglobin 12.5, 3 stabs, 61 segs, and 36 lymphs. On July 30: RBC 3.83, hemoglobin 10.5. On August 8: RBC 3.393, hemoglobin 11.2. On August 15: RBC 4.04, hemoglobin 11.9. Serology: Negative Kahn. L.E. cells, negative.

Because of persisting jaundice and failure to improve, together with laboratory studies indicating an obstructive type of jaundice, laparotomy was performed four weeks after onset and nine days after admission, revealing negative findings in the gallbladder, cystic and common ducts. The liver was found to be large, pale, slightly gray, granular and firm. The pancreas was normal to palpation and gross appearance. (Similar findings reported by Whitfield)⁴.

Liver biopsy report: "Microscopic section reveals the liver tissue to show central veins which contain some red blood cells. The sinusoids are devoid of content and the hepatic cord cells appear to be well preserved and to contain the usual amount of glycogen cytoplasmic material.

Some areas of engorged bile canaliculi are noted in the immediate vicinity of the central veins. Some of the hepatic cord cells about the central veins contain bile pigment. There is no evidence of regeneration. The appearance of bile in the canaliculi, but not present in the periportal bile ducts, simulates the histology of a peripheral biliary obstruction which has relieved itself recently. No evidence of hepatic cord damage is noted."

The postoperative course was relatively uneventful except for a recurring mild bleeding from the incision. A gradual decrease in jaundice was noted both on inspection and by laboratory.

She received treatment with frequent glucose solutions from July 19 to August 16, Vitamin K parenterally, antibiotics postoperatively and a low fat nourishing diet with supplementary vitamins. Laxatives and narcotics were prescribed.

Discussion

Symptoms and course are typical of that described for Chlorpromazine jaundice. After being on the drug for more than one week an abrupt onset occurs with grippelike aches accompanied by fever. A short febrile course accompanied by nausea and vomiting is followed by dark urine, clay colored stools, pruritis, and jaundice with some persisting nausea. The laboratory findings showed typical obstructive jaundice. Gradual recovery is the rule; however, in this instance a more than usual prolonged course was observed. Reports of pathologic involvement vary from biliary stasis to peripheral lobular vasculization and minor periportal lymphocytic and polymorphonuclear infiltrations⁵. Except for biliary retention phenomena, hepatic function tests are normal⁶.

Since there is an absence of surgically amendable biliary obstruction and in view of the fact that recovery is the rule, treat-

ment should be conservative. In the light of our experience and that of others⁶ exploration of Chlorpromazine jaundiced patients should be deferred unless clear cut indications for laparotomy are demonstrated.

Loftus et al⁶ issued a warning against unnecessary laparotomy. Surgery in our case may or may not have been justified; however, should suspicion of stone, stricture or operable malignant lesion be strong, one would hesitate to interfere with laparotomy in a case of possible Chlorpromazine jaundice. Surgery does not seem to significantly

interrupt the normal convalescence in the jaundiced patient from his drug¹.

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Twenty-One More Auto Crashes With Seat Belts*

Horace E. Campbell, M.D.

DENVER

IN PREVIOUS communications, the rationale of the seat belt in the automobile has been presented, together with a review of forty-one actual highway crashes with belts. These have been collected from various sources, e.g., newspapers, personal "tips" from friends, and several state patrol organizations.

In recent weeks, the seat belt idea has been accepted by several of the motorcar companies to the extent that belts are provided as optional equipment. This should lead to marked increase in the use of seat belts in automobiles, an event greatly to be hoped for. Nothing can so reduce the carnage on our highways as the routine use of some form of restraint or fixation for the people in the car. At the moment, the seat belt is the most feasible device, but we may expect other, perhaps more effective, devices as development proceeds.

Twenty-one further crashes with belts are here presented. It should be pointed out that many others have no doubt occurred, but at present, no over-all collecting method has been devised. The American Medical Association has passed a resolu-

tion asking all motor vehicle departments to assemble statistics on crashes with belts. In this way, definitive large-scale conclusions may presently be achieved.

The next four cases have been kindly furnished me by Commissioner Bernard Caldwell, of the California Highway Patrol, to augment a series of ten cases furnished previously.

Case 42: December 3, 1953, 11:55 a.m. Officer pursuing a speeder and traveling approximately 80 mph on a four-lane divided highway with red light and siren in operation, when a car driven by an elderly man changed lanes directly in front of the officer. In order to avoid striking the car that had changed lanes, the officer applied brakes and pulled to left, over the curb, slid 291 feet, struck a sign post and overturned. After crash, officer climbed out of car, flagged down another car, pursued and apprehended car that had cut him off. Officer states: "I sustained no apparent injury from this accident in which the car was extensively damaged and I feel that this was due to the use of the safety belt."

Case 43: March 2, 1955, 5:45 p.m. Officer was traveling 40 mph through a city in response to an emergency call, siren and red light in operation, when another car entered highway from his left, 75 feet in front of the patrol car. He applied brakes and struck car in the center of right side with front of patrol car. Officer bruised, patrol car damaged in amount of \$678. Other driver sustained "minor" injuries, nature not stated, not wearing seat belt. No other occupants.

*Read at the Eighty-Fifth Annual Session of the Colorado State Medical Society, Denver, September 23, 1955. The author is Chairman, Automotive Safety Committee, Colorado State Medical Society.

Case 44: April 20, 1955, 9:55 a.m. Patrol car chasing a speeder approximately 65 mph on a wet road, red light and siren in operation, was passing two cars when rear car also started to pass and forced patrol car off of road and into tree. \$900 damage to patrol car. Officer stated his seat belt was fastened loosely. Does not remember clearly but believed he unhooked seat belt, staggered out of car and collapsed. He was found unconscious outside of car near left door by first passing motorist. All of ribs on officer's left side were broken as well as left tibia. Officer was still off duty July 12, 1955.

This case points up the need for two developments in motorcar safety. First, we need to design the steering assembly so that it is energy absorbing. That this can be done is attested by the new form of steering wheel just introduced by one of the important car manufacturers. Next, some additional restraint for the upper torso is needed. Some form of shoulder strap or chest belt, that is both convenient and comfortable, must be developed. In military aviation, the inertia reel has been developed to meet this need. This is a call upon the motor car manufacturers to make this device available in our motor cars.

Case 45: May 10, 1955. A patrolman, driving 65 to 78 mph on two-lane highway preparing to stop a car going in the same direction, had just passed a car going same direction and returned to right side of road when it was necessary to apply brakes. Right front brake locked causing car to go into broadslide, left side leading. Car overturned on left side and slid into tree. Rear of top of car in impact with tree. Car a total loss. Two officers received "minor" injuries, nature not stated.

Case 46: The Washington Post for August 2, 1955, records an incident where a car went out of control, hit a tree and burst into flame. The one passenger was pulled from the car by its driver just before the fire started. Both men credited the automobile safety belts they were wearing with saving their lives.

Case 47: The Omaha World Herald for July 20, 1955 reports, "Safety belts probably saved two lives early Wednesday, police said. There was obvious evidence of high speed. The car left only seven feet of skid marks before the impact with the railing and concrete base on the wrong side of a viaduct. Chunks of concrete were thrown 35 feet. Ten feet of heavy iron pipe railing were torn loose. One piece of pipe bored through the hood and windshield to within inches of the driver's head."

Case 48: A family of five went off the road at 70 mph. All had their belts fastened except the wife who was thrown half way out of the car through a window as it flipped end over end and rolled side over side several times. Her injuries to forehead and chest required several weeks in hospital but the others had only minor bruises and scratches.

Case 49: A mother and small son, the former wearing no belt, the latter in a special children's belt, went off the road at 50 mph in a four-door 1951 Ford and turned over one and a fourth times. All the glass except the rear window was smashed. Only injuries to the pair were small glass cuts.

Case 50: A traveling salesman, with long driving experience, had just purchased a 1955 Ford two-door sedan, new and with belts. He had one passenger, was crowded off the road by an approaching, passing car, and turned over two and a half times. They sustained only minor bruises. Neither of the two approaching cars stopped to assist.

Case 51: The Milwaukee Sentinel of June 1, 1955, records: "William Richter, 25, of Manitowoc, credits a safety belt he had installed in his car with saving his life. The car was demolished when it swerved off the highway, just missed a power-station, struck two trees, uprooted a third, and knocked down part of the porch of a house before stopping. Richter, held in his seat by the belt, was only scratched."

Case 52: A sports car driver, participating in an authorized race in Salida, Colorado, while negotiating a 90° right turn at 50 mph left the course and struck a tree head-on. He was thrown to the inside of the steering wheel and struck his lower jaw against the cowling. He was unconscious for a few minutes and the lower lip was cut through by the teeth, but this was the extent of his injury.

Case 53: A sports car driver, aged 33, who has been driving since aged 11, was passing a tractor-trailer on the highway, and was forced by an oncoming car into and partially under the trailer. The right wheels of his sports car were gradually demolished by the trailer, but despite the violent lurching of his car he was able to maintain his seat with the aid of his belt until the driver of the tractor could bring his rig to a halt.

Case 54: An auto-equipment salesman, who drove 88,700 miles in the last year, was passing a flat trailer in his 1954 Buick two-door Century at 85 mph when a six foot long 4" by 4" timber fell off the trailer directly into his course. All tires, except the left rear, blew out at once. By judicious acceleration and maneuvering of the steering wheel he managed to stay upright and slid backwards through a fence. Having had long experience as a racing driver, he has had belts in his cars for years, and tells me he could not have controlled his car this time without the belt.

Case 55: A young man in a 1954 Chevrolet equipped with belts, was forced off the road to the extent that all four wheels were on the shoulder, yet he was struck by the oncoming car. He had his seat belt fastened fairly tight and his body "did not slide in the seat." Having a good firm grip on the steering wheel he was able to keep the car under control. He

wrote, "I certainly believe I would have been killed or seriously injured if I had not been strapped in."

Case 56: A correspondent writes, "I had slowed down because of a recent accident that wasn't cleared up yet. The car behind me did not see all of the flares and ran into the rear of my car so hard that he had to be towed away. My mother was in the seat beside me, but because we both had safety belts on, she only received a bruised knee. The belt also made it easy for me to keep my car under control, even though my arms were pushed into the steering wheel hard enough to break two of the small spokes.

Case 57: The above writer goes on to say, "I have a friend who owes his life to safety belts. Riding in a convertible which was flipped over when he ran into an embankment and landed on the top, he received a slight concussion. His passenger got only a small lump on the head and a scratched arm. The belts kept them in the car and not thrown out to have the car roll on top of them."

Case 58: A safety belt manufacturer was suddenly faced at 60 miles per hour with an approaching, skidding car whose driver had been forced out of his lane by a preceding car. The car belt maker chose the broad, deep ditch on the right. In coming up out of the ditch again he almost turned over, but saved himself by turning down into the ditch again and came to a stop safely up on the shoulder. The skidding car also came to a stop safely. The manufacturer feels that he was able to keep control of the car because he was fastened firmly behind the wheel.

Case 59: The president of a seed concern was driving a company car equipped with belts. He and his passenger collided with a truck to the extent that the entire left side of his car was pushed in for a distance of six inches to a foot, from front to rear. He received fractures of left forearm, left leg, pelvis, and two or more ribs. The passenger suffered head lacerations and strained neck. "Without the safety belts we feel that we probably would not be here. The doctor who set my arm and leg installed belts in his car the week of my accident."

Case 60: The Indianapolis Star reports a three car collision in which no one was seriously hurt. One of the cars was described as "Bantam-sized" and "demolished." The photograph would bear this out. The occupants were wearing belts and escaped with minor cuts.

Case 61: The Cleveland Plain Dealer for September 3, 1955, recounts the escape from injury by a visiting Chicago couple, the front tire of whose 1953 Chrysler blew out and hurled their car into two parked cars, sideswiping the first, and ramming into the rear of the other so hard that it was pushed into fireplug, cracking it. The Police Sergeant said, when he saw the Bishop car, "If the couple had not been using safety belts, Mr. Bishop would certainly have

been thrown through the windshield, and Mrs. Bishop (who was driving) would probably have been hurt, too." Mr. Bishop said the belts, installed less than a month before, were the best \$30 he ever spent.

Case 62: A Jaguar sports car, with two occupants, overturned and slid on its right side. Both occupants were wearing belts and the passenger was killed. We hope to obtain further details of this case.

Discussion

We have collected a total of sixty-two crashes with belts to date, with only two fatalities. These were in open cars, a convertible and a sports car, both of which overturned.

While these two fatalities *might* have been avoided if the victims had been free to be thrown from the car, careful studies indicate that one's chances are better by two to one, if one stays in the automobile. Thus these fatalities indicate, not that belts are dangerous, but that open cars are dangerous. In these sixty-two crashes, three other persons received severe injuries, one to the head and one to the chest. These two would have been prevented by the use of shoulder straps. In the fifty-seven remaining cases, the injuries were all minor, even in some crashes which the investigating authorities rated as "sure fatal."

These cases give clear-cut evidence that our traffic deaths and injuries can be sharply reduced by the routine use of devices to hold the motorist in his seat. At the moment, the familiar seat-belt is the most accessible device. Sooner or later, newer and better devices will come into being, if the motoring public insists upon safety in its motor cars.

There has been considerable controversy among the experts and the publicity men as to what per cent of the present deaths and injuries the seat belt would save. The suggested percentages run anywhere between 25 and 90. Lt. Col. John P. Stapp, of Holloman Air Force Base, points out that if safety measures saved only 20 per cent, this would save more lives than if we had a perfect vaccine against polio, pneumonia, diphtheria, and all the other infectious diseases combined, excepting tuberculosis.

Summary

1. Uncontrolled deceleration of the crash-

ing motorist is the direct cause of the deaths and injuries on our streets and highways.

2. If the motorist in a crash slows down with the car instead of against the forward structures, he can survive the vast majority of these crashes, often without any injury.

3. The seat-belt, preferably with additional shoulder straps, can effect this remarkable change in our traffic accident situation.

4. If the belts will save only 20 per cent this will save more lives than a perfect vaccine for polio and all other acute infectious diseases.

5. Actually, belts will save a far greater percentage than this, and increasing use will demonstrate this.

N.B. In somewhat less than four months since this paper was submitted, twenty-five further crashes with belts have come to our notice. There

were two more fatalities, both in an open sports car which plunged fifty feet down from the highway into a lake. Three persons received moderate injuries, which would have been prevented either by shoulder straps or adequately padded instrument panels and steering columns.

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Don't Be Caught Cancer-

Napping in April*

During this month of April most physicians should receive more than the usual number of requests for general physical check-ups to rule out possibilities of any malignancy. Every physician should therefore keep this in mind constantly, and be prepared to do a thorough and effective examination in response to each request.

April—Cancer Prevention Month by Congressional enactment of many years' standing—is seeing wide distribution of public educational material as well as fund-raising

requests through the American Cancer Society. This year the April slogan is: "Fight Cancer with a Check-up and a Check." This slogan again re-emphasizes the Cancer Society's prime objective of educating people to see their physicians for periodic physical examinations and thus detect any beginning malignancies early enough for effective treatment.

It is obvious that we doctors can and should help spread this same education. But, foremost, we must all be ready to perform the examinations whenever requested. We as doctors all know that our best hope for reducing cancer deaths is early detection, early diagnosis, and early treatment.

ERVIN A. HINDS, M.D., Chairman,
Cancer Control Committee.

*Please also see full-page announcement, Page 421, this issue.

THIRD NATIONAL CANCER CONFERENCE

The American Cancer Society and the National Cancer Institute will conduct their Third National Cancer Conference June 4, 5, and 6 at the Sheraton-Cadillac Hotel, Detroit, Michigan.

This meeting will consist of a series of symposia on various cancers, by site, and present a summarization of recent clinical developments in both diagnosis and treatment of cancer. Symposia

will be given on the breast, head and neck, lung, female genital tract, gastrointestinal tract, prostate, on lymphoma and leukemia, chemotherapy, and on end results as shown by a series of reports from selected institutions on the current curability of cancer.

All physicians are cordially invited, and an interesting program for wives is being planned by the local host committee.

*Medical Education in Colorado**

Robert C. Lewis, Ph.D.

DENVER

CONSIDERING the best way to present this review of medical education in Colorado, I felt at first that it should not be a chronicle of my own experiences, but rather an impersonal account of the historical development of the School of Medicine of the University of Colorado during the past forty years. My attempt was the production of a very prosaic account, which could well be enlivened by mentioning personal experiences as illustrative of conditions existent in the passing years. Perhaps my readers will forgive me for considering this the best approach, and for following this inclination. Most of them, many of whom are my former students and friends, will feel that, just as poetic license is permissible under certain circumstances, so personal privilege is justified in the present instance.

My experiences as a member of the medical faculty of the University of Colorado have been most valuable and extremely interesting. One draws frequently on such experiences, albeit many times subconsciously, with the passing years. I have always been glad that I decided to come to Colorado and to remain here so long, finding happiness and satisfaction as a member of the faculty. Undoubtedly, this explains my maintaining an optimistic outlook for the University of Colorado School of Medicine ever since my arrival. I may be able to impart some of this spirit of satisfaction and optimism to my readers through this report.

*This account of medical education in Colorado, illustrative of the growth and development that has taken place in all 81 medical schools of our country, is presented in anticipation of the first National Medical Education Week, April 22-28, 1956. It has been prepared at the request of the Colorado committee which is planning the implementation of the program for that week. Since members of the medical profession will be chiefly responsible for dissemination of information about medical education and the problems of medical schools, it is hoped that the information given about the University of Colorado School of Medicine and its problems will be helpful to that end. The author is Dean of the School of Medicine.

Upon my arrival at the University in 1916, there were few physical facilities in the School of Medicine to lead to optimism. However, President Livingston Farrand, who had interviewed me in Washington, D. C., concerning a possible appointment to the faculty, had prepared me not to expect much in that respect. He spoke of men rather than plant and fired me with enthusiasm about the caliber of the medical faculty and with optimism concerning the future of the medical school. He had not exaggerated regarding the faculty; a finer group of men would be hard to find. The memory of friendships formed in those early days at the University will remain with me always. Moreover, I have lived to see the fulfillment of his prophecy regarding development of the School of Medicine to a degree even beyond his expectations.

Many changes have occurred in the University and in its School of Medicine during these forty years. In 1916, the first two years of medicine were taught in Boulder and the last two years in Denver. Each division had a single inadequate building for its teaching program. As Professor of Biochemistry, I was a member of the Boulder Division of the medical faculty. At that time, there were only four full-time and two half-time members in Boulder and only one full-time member in Denver. The rest of the faculty were volunteer members. I shall refrain from mentioning any of them by name, lest there seem to be discrimination by inadvertent omission.

Some idea of the growth of the School of Medicine may be gained by citing certain comparisons. In 1916, registrants in both divisions of the School of Medicine numbered 79 and all were medical students; in 1956, there are 316 medical students, 37 basic science graduate students, 48 interns, 110 residents or clinical graduate students and 85 students in technical studies related to medicine—a total of 596 students. In 1916,

there were 75 members of the medical faculty; in 1956 there are over 700. The seven full-time faculty members in 1916 have increased to 200 full-time or part-time salaried faculty members in 1956. Sixty per cent of these are supported by research or teaching grant funds.

In 1916 the teaching load was tremendous. I came to the University as Assistant Professor and Head of the Department of Biochemistry and Physiology, alone in the Department except for a part-time student assistant. Yet my duties included teaching medical students both biochemistry and physiology, giving a course in biochemistry to students in the College of Arts and Sciences and teaching chemistry to nursing students. This continued for only two years, at the end of which time a new member of the faculty assumed full responsibility for physiology. Even then, there remained little time for research, although I retained interest in investigation even against such odds and, by courtesy, had an office and research laboratory in the Denison Building located about 100 yards west of the Medical Building, which later housed the School of Music and was razed less than a year ago.

Conditions changed but little in my eight and one-half years on the Boulder campus. World War I reduced the total number of students in the University to less than 900. Several members of the faculty and even some of the medical students entered the armed services but returned to the University after the war. In the early 1920's, plans began to be made for buildings to house the School of Medicine and the new University hospitals in Denver. It was my pleasure to serve as a member of the faculty planning committee for the new school. Dean Charles N. Meader (1916-1925) deserves great credit for the part he played in building the original part of the present Medical Center. In spite of a busy practice, he gave unsparingly of his time and often labored far into the night and on weekends in planning the new physical plant. Unfortunately his health has not permitted him to enjoy the fruit of his labors.

The combined School of Medicine started

to function in Denver in the fall of 1924. At the same time, increases in the faculty of the basic science departments began and continued until all departments had enough faculty members to lighten the teaching load and to leave time for all members of the faculty to do research. During those years, my experience as Head of the Department of Biochemistry was extremely pleasant. We had a happy departmental faculty group and a large number of graduate students. Many of them have had successful careers since completing their graduate work and leaving Colorado.

During the period 1925-1945, when Dean Maurice H. Rees had full administrative responsibility for the School of Medicine and Hospitals, a number of important additions to the physical plant were made. These included construction of The Charles Denison M.D. Memorial Library with its second floor auditorium, an addition doubling the capacity of the Nurses' Home (now the Women's Residence Hall) and addition of the east wing of Colorado General Hospital. Also during this period the faculties of the basic science departments were considerably strengthened and a beginning was made to the appointment of full-time members of the faculty in other clinical departments than Psychiatry and Radiology by initiating this policy in the Department of Medicine. In retrospect, I am impressed with the success which Dean Rees had in keeping the operation of the School of Medicine and Hospitals on an even keel during those twenty years when financial support was limited and the depression of the early 1930's and World War II presented many difficult problems.

The last decade, 1945-1955, may be characterized as a period of rapid growth and development of the Medical Center. Following the death of Dean Rees in 1945, Dr. Ward Darley, now President of the University of Colorado, had become Dean of the School of Medicine and later Director of the Medical Center. Under his able leadership, changes that are truly amazing have taken place. The most important of these have been the assembling of a nucleus of full-time faculty members in each of the clinical departments, further strengthening of the





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¹January, H. L. et al: Clinical experience with tetracycline. *Antibiotics Annual 1954-55*, p. 625.



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faculty of the basic science departments, affiliation of Denver General Hospital with the School of Medicine as an integral part of its education program, the relief of overcrowded conditions by construction of the Florence R. Sabin Building for Research in Cellular Biology and addition of a third floor to the Verner Z. Reed Outpatient Clinic Building to provide facilities for cardiovascular research, a radical revision of the undergraduate medical curriculum, and organization of strong programs of graduate medical education (intern and residency training at a true educational level) and of intramural and extramural postgraduate medical education. Also during this period, there has been a tremendous increase in research activity.

The importance of revision of the undergraduate medical curriculum cannot be overemphasized. The new curriculum has attracted wide attention and received commendation from many sources. Its main features may be summarized as follows:

1. Didactic clinical instruction by lectures has been curtailed and has been replaced by clinical clerkship teaching.
2. Formal lectures in the senior year have been completely eliminated. The class as a whole spends two mornings each week in attending clinical, radiological and clinical-pathological conferences and grand ward rounds. The rest of their time is spent in clinical clerkship responsibilities.
3. A number of integrated courses have been introduced into the curriculum. These include Medicine as Human Biology in the freshman year, Microbiology in the sophomore year, Survey of Human Disease in the sophomore and junior years and General Medical Clinic in the senior year. Faculty members from different departments cooperate in teaching these courses.

Growth of postgraduate medical education has exceeded all expectations. In 1954-1955, attendance in courses at the School of Medicine was 2,661. Extramural courses were also given in many communities throughout the State.

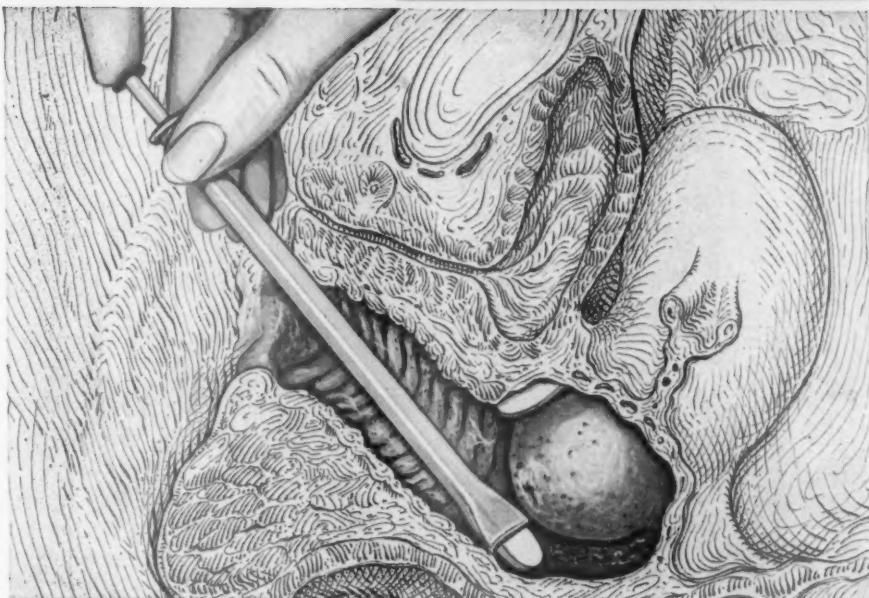
Increase in research has been made possible by support derived from granting agencies and foundations. In 1954-1955 the amount received for this purpose was \$729,460. More than half of this amount came from government agencies. Many of the full-time faculty receive full or partial support from these grants.

Need for increase in the number of salaried members of the faculty mentioned near the beginning of this paper may be explained by two simple statements. Only these faculty members are free enough to conduct laboratory courses in the basic sciences, to spend concentrated time of three to four hours duration daily in clinical clerkship teaching or to devote sustained effort to scientific research. Volunteer members of the faculty simply do not have concentrated time to give to these necessary functions of a modern medical school.

At this point, I wish to pay tribute to the volunteer members of our faculty who have devoted so much of their time, without financial remuneration, to the teaching program of the School of Medicine. Undoubtedly, they have received a great deal of satisfaction and considerable benefit from their efforts or they would not have wished to remain members of the faculty. Their total contribution has been tremendous and, in spite of a feeling to the contrary by some few of them, their participation continues to be absolutely essential for success of the teaching program. Let no one get the distorted impression that the School of Medicine could continue to maintain its high standing among medical schools without its volunteer faculty members. Devotion to their self-chosen task of teaching is inspiring and I am happy to have this opportunity to express to them deep appreciation for their contribution as teachers.

Three affiliated organizations on the campus of the Medical Center contribute substantially to the educational program of the School of Medicine. The oldest is the Child Research Council, which has completed twenty-five years of important research on human growth and development. Many of the professional staff members of this group have faculty appointments and constitute the Department for the Study of Human Growth. Their contribution to the School of Medicine through teaching and participation in committee work is significant. Members of the professional staffs of The Belle Bonfils Blood Bank and the Colorado Foundation for Research in Tuberculosis are likewise members of the faculty and give valuable aid to the educational program

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of the School of Medicine. Mention has already been made of affiliation with Denver General Hospital. A similar affiliation, although on a smaller scale, exists with the National Jewish Hospital. Members of the full-time staffs of both hospitals are members of the faculty of the School of Medicine and make substantial contributions to the teaching program. The participation of all of these affiliated groups is greatly appreciated.

Special mention should be made of an important recent addition to the physical plant of the Medical Center. Not since the Colorado Psychopathic Hospital was completed in 1924 had there been any addition to its physical facilities. For several years one of the temporary barracks buildings on the east end of the Denver Campus had been used to house the Division of Mental Hygiene. Completion and dedication of the new Psychiatric Clinic Building in 1955, as a part of the Colorado Psychopathic Hospital, makes provision for greatly improved facilities for this outpatient service as well as for the teaching and administrative functions of the Department of Psychiatry.

Keen interest in the philosophy of medical education by members of the faculty of the School of Medicine has resulted in certain definite improvements in the program of medical education during the past years and may be expected to produce further improvements in years to come. The Curriculum Committee is presently considering changes that may be deemed desirable. This ever-watchful attitude of the faculty leaves no fear that satisfaction with the status quo will result at any time in the future by failure to make periodic reviews of the curriculum.

Augmented instructional expense resulting from increase in salaried faculty members, increased costs of supplies and equipment, and the acute need for additional capital improvements to provide more space

in the medical school and hospitals presents a financial problem with which it will be difficult to cope. There is great need for financial support from outside sources to supplement income received from the State. A start in this direction, which has unlimited potential, has been made by annual giving to the National Fund for Medical Education—directly by industry and indirectly by physicians through the American Medical Education Foundation. We are grateful indeed to our alumni and other physicians who have designated the University of Colorado School of Medicine to be the recipient of donations which they have made to the American Medical Education Foundation.

In closing, the following is a list of needs of the Medical Center, as I see them:

1. An addition to the medical school building.
2. An addition to Colorado General Hospital.
3. An addition to the Nurses' Home for classrooms and offices for the School of Nursing.
4. Dormitories for housing students at reasonable rates.
5. Recreational facilities for students (our small gymnasium was on land sold to the V.A. Hospital).
6. Increase in salary for both clinical and basic science faculty members (necessary to secure and to retain highly qualified faculty members).
7. Additions to departmental supply and equipment budgets (presently woefully inadequate, in many instances).
8. Increased loan funds.
9. Scholarship funds, particularly for needy students.
10. Additional stipends for interns and residents.
11. Increased library facilities.

MONTANA TRUDEAU SOCIETY MEETS

It was announced by Dr. John A. Newman, Butte, Chairman of the Program Committee, that the Society will hold its annual meeting Friday afternoon, April 27, and Saturday morning, April 28, at the VA Center in Fort Harrison. Papers will be delivered by Drs. Norman J. Wilson, Boston; Daniel W. Zahn, Seattle; Byron F.

Francis, Seattle; and Robert B. Beans, Great Falls.

A symposium moderated by Dr. E. L. King, Browning, includes panelists Drs. H. C. Jernigan, Albuquerque; J. H. Schaeffer, Billings; and P. R. Ensign, Helena, and is scheduled for the Friday program followed by the banquet at Frontier Town.



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References: 1. Bunim, J. J., et al.: J.A.M.A. 157(31), 1955. 2. Forsham, P. H., et al.: Paper presented at First Internat. Conf. on Prednisone and Prednisolone, New York, May 31-June 1, 1955. 3. Perlman, P. L., and Tolksdorf, S.: Scientific Exhibit presented at A.M.A. Annual Meet., Atlantic City, June 6-11, 1955.

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The Washington Scene



A monthly news summary from the nation's capital
by the Washington Office of the A.M.A.

A little-publicized study group of eight physicians and scientists has submitted a report to the Secretary of Health, Education, and Welfare that promises to stimulate considerable debate by all interested in medical research, including members of Congress.

The committee was appointed by the National Science Foundation a year ago at the request of former HEW Secretary Hobby for "a critical review" of the scope and distribution of all phases of medical research where U. S. funds are used. Heading the committee was Dr. C. N. H. Long of the Yale School of Medicine.

Three basic proposals of the committee:

First, that research within the National Institutes of Health research be levelled off, and policy and personnel matters there be brought under the scrutiny of an advisory board of non-governmental medical scientists.

Second, that other research under the Public Health Service, including teaching grants to institutions and fellowships, be put under a new Office of Medical Research and Training, reporting directly to the HEW Secretary and outside the control of PHS.

Third, that emphasis be placed on general research rather than the present trend of specific grants for specific disease studies, the so-called categorical approach.

On receipt of the report, Secretary Folsom promised it would be studied "intensively" both by HEW and PHS officials, but he set no time deadlines.

The Long Committee noted the tremendous growth in federal medical research during and since World War II and the increasing role played by PHS. While conceding that PHS has done its job effectively, the committee felt that the time has come to re-examine the concentration of activities under one agency.

On its first point the committee said NIH is making a major contribution in medical research and that senior appointments there should actually become "the most sought after in the country." It suggested legislation that would permit employment of research scientists at the institute without regard to commissioning in the PHS Corps or salary limitations imposed by civil service.

On its second basic proposal, the committee recommended that the new agency have authority over (a) unrestricted, long-term institutional grants, (b) grants for research, both categorical

and non-categorical, (c) fellowships and traineeships in medical and related areas, and (d) grants for construction of research and teaching facilities.

Commenting on the categorical approach to research, the committee said the public has been "led to believe, consciously or unconsciously, that the donation of sufficient sums of money is all that is needed to eradicate diseases which have plagued mankind for centuries."

In Congress, any move away from categorical grants in medical research is certain to produce fireworks. Some Senators and Representatives believe it's Congress' responsibility to pinpoint where money it appropriates is to be spent, and they are not inclined to make an exception for research money.

Two bills on military medical legislation went through the House without change, after detailed hearings and study by a subcommittee. The expectation is that action on them will not be long delayed in the Senate.

One is designed to make military medical careers more attractive by allowing credit for time spent in medical school and internship, and setting up a series of three \$50 per month raises after three, six and ten years' service. These would be in addition to the present \$100 per month special pay for medical officers. Public Health Service medical officers would benefit, as well as those in Army, Navy and Air Force.

The other bill well on its way to becoming a law allows dependents of servicemen to receive private hospital and medical care, with the government paying the costs of the insurance or health plan coverage and the dependent the first \$25 of the hospital bill. The Secretary of Defense, however, could limit or deny such private care in areas where he determines that military medical facilities are adequate to handle the service families.

Notes:

Some of the pharmaceutical houses have told Secretary Folsom that they plan to use more personnel and equipment to step up production of Salk vaccine, but his expectation still is that it will be "many months" before there will be enough vaccine for three shots for "all who need them."

Almost all medical programs handled by U. S. Public Health Service are virtually assured of comfortable increases in money for the next fiscal year. The House approved recommendations of its Appropriations Committee without change. The only large reduction was \$19 million in money for the Hill-Burton hospital construction program, the committee explaining this action was taken because the "new" HB program (for clinics, chronically ill hospitals, nursing homes, rehabilitation centers) is getting off to a slow start.

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(1) Payne, R. W.; Shetlar, M. R.; Farr, C. H.; Hellbaum, A. A., and Ishmael, W. K.: J. Lab. & Clin. Med. 45:331, 1955. (2) Bunim, J. J.; Williams, R. R., and Black, R. L.: J. Chron. Dis. 1:168, 1955. (3) Holbrook, W. P.: M. Clin. North America 39:405, 1955.

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ORGANIZATION

PROGRAM

SEVENTY-FOURTH ANNUAL SESSION NEW MEXICO MEDICAL SOCIETY

Roswell, May 2, 3, 4, 1956

Sponsored by
The Chaves County Medical Society

GENERAL INFORMATION

Registration Desk:

Roswell Senior High School.
Open May 1—5:00 p.m. to 8:00 p.m.
Open May 2—8:00 a.m. to 5:00 p.m.
Open May 3—8:30 a.m. to 5:00 p.m.
Open May 4—8:30 a.m. to 12:00 noon.

Registration Fee:

Members and guests—\$15.00.
Nurses, Medical Students, Residents, Interns
and Doctors in the Armed Forces may register
without fee.

Technical Exhibits:

Foyer, Roswell Senior High School.

Scientific Exhibits:

Library, Roswell Senior High School.

Meeting Place for Council:

1:00 p.m., May 1, Nickson Hotel.

Meeting Place for House of Delegates:

First Session, 7:00 p.m., May 1, "Little Theatre,"
Roswell Senior High School.

Second Session, 8:30 a.m., May 2, "Little Theatre," Roswell Senior High School.

Meeting Place for Scientific Sessions:

"Little Theatre," Roswell Senior High School.

WEDNESDAY AFTERNOON

May 2, 1956

OPENING CEREMONIES

Earl L. Malone, M.D., Presiding
Retiring President, New Mexico Medical Society
1:30- 2:00—"Little Theatre," Roswell Senior High School.

Invocation—Rev. Austin H. Dillon, Pastor,
First Methodist Church, Roswell.

Welcome Address—Mayor of Roswell.

Welcome Address—E. W. Lander, M.D.,
President, Chaves County Medical Society.

Presidential Address — The "Do-It-Yourself," Syndrome—Stuart W. Adler, M.D.,
President, New Mexico Medical Society.

SCIENTIFIC PROGRAM

Earl L. Malone, M.D., Presiding
Retiring President, New Mexico Medical Society

for APRIL, 1956

- 2:00- 2:30—"Biologic Patterns in Human Cancer"—Ian MacDonald, M.D., Los Angeles.
2:30- 3:00—"Hodgkin's Disease With Emphasis On Mechanism of Death"—Vernon E. Martens, Capt., MC USN.
3:00- 3:30—Intermission to View Exhibits.
3:30- 4:00—"Spine Fusion, Stressing Indications"—Dana M. Street, M.D., Memphis.
4:00- 4:30—"Radiological Considerations of Gastrointestinal Bleeding"—Robert D. Moreton, M.D., Fort Worth.
4:30—Visit Exhibits.
7:00—Stag Smoker and Buffet, Roswell Country Club. Courtesy Chaves County Medical Society. All exhibitors are invited guests.

THURSDAY MORNING

May 3, 1956

- Samuel R. Ziegler, M.D., Presiding
Vice President, New Mexico Medical Society
9:30- 9:30—"Hysterectomy"—Conrad G. Collins, M.D., New Orleans.
9:30-10:00—"Peripheral Vascular Disease"—Morris J. Fogelman, M.D., Dallas.
10:00-10:15—Intermission to Visit Exhibits.
10:15-10:45—"The Treatment of Myocardial Infarction"—Carleton B. Chapman, M.D., Dallas.
10:45-11:15—"Out Patient Management of Hypertension"—John H. Moyer, M.D., Houston.
11:15-11:45—"Rheumatic Fever as a Diagnosis Problem in the Subtropical Climate"—Forrest H. Adams, M.D., Los Angeles.
12:15- 1:30—Round Table Luncheons.
Medicine—St. Mary's Hospital Staff Room.
Ethelbert J. Hubbard, M.D., and Daniel H. Cahoon, M.D., Presiding.
Guest Speakers — Drs. Chapman, Moyer, Adams, Collins and Moreton.
Surgery — Eastern New Mexico Medical Center Staff Room. John S. Moore, M.D., and Quentin Florence, M.D., Presiding.
Guest Speakers — Drs. MacDonald, Fogelman, Street and Martens.
1:30—Visit Exhibits.

THURSDAY AFTERNOON

James C. Sedgwick, M.D., Presiding
Councilman, New Mexico Medical Society

- 2:00- 2:30—"Amateur Clinical Psychology for the Cancer Patient"—Ian MacDonald, M.D., Los Angeles.

2:30- 3:00—"The Treatment of Post-Traumatic Paraplegia"—Dana M. Street, M.D., Memphis.

3:00- 3:15—Intermission to Visit Exhibits.

3:15- 4:30—Panel Discussion on "Acute Anuria"—Conrad G. Collins, M.D., Moderator. Panel Participants—All guest speakers.

4:30- 4:45—Sears-Roebuck Foundation Fund—Robert D. Moreton, M.D., Fort Worth.

7:00—Dinner-Dance, Officers Club, Walker Air Force Base (formal optional).

FRIDAY MORNING

May 4, 1956

Allan Haynes, M.D., Presiding President, Curry-Roosevelt County Medical Society

9:00- 9:30—"Fluid and Electrolyte Balance in Surgery"—Morris J. Fogelman, M.D., Dallas.

9:30-10:00—"Pharmacodynamics and Therapeutic Uses of Diuretics"—John H. Moyer, M.D., Houston.

10:00-10:15—Intermission to Visit Exhibits.

10:15-10:45—"Clinical Aspects of Cardio-Pulmonary Disease"—Carleton B. Chapman, M.D., Dallas.

10:45-11:15—"X-ray Diagnosis of Non-Tuberculous Pulmonary Disease"—Robert D. Moreton, M.D., Fort Worth.

11:15-11:45—"Fatal Coronary Arterio-Sclerosis in Young Adults"—Vernon E. Martens, Capt., MC, USN.

12:15- 1:30—Round Table Luncheons.

Medicine—Eastern New Mexico Medical Center Staff Room. Earl L. Malone, M.D., and Pierre Salmon, M.D., Presiding.

Guest Speakers — Drs. Chapman, Moyer, Adams, and Martens.

Surgery—St. Mary's Hospital Staff Room. Richard P. Waggoner, M.D., and Ira J. Marshall, M.D., Presiding.

Guest Speakers — Drs. MacDonald, Fogelman, Street, Collins, and Moreton.

FRIDAY AFTERNOON

Stuart W. Adler, M.D., Presiding President, New Mexico Medical Society

1:30—Visit Exhibits.

2:00- 2:30—"Heart Disease in Infants and Small Children"—Forrest H. Adams, M.D., Los Angeles.

2:30- 3:00—"Post-Partum Complications"—Conrad G. Collins, M.D., New Orleans.

3:00- 3:15—Intermission to Visit Exhibits.

3:15- 4:30—Panel Discussion on "Steroids"—John H. Moyer, M.D., Moderator. Panel participants—All guest speakers.

4:30- 5:00—Visit Exhibits.

PROGRAM, AUXILIARY TO THE NEW MEXICO MEDICAL SOCIETY

Registration:

Roswell Senior High School.

May 2, 8:00 a.m. to 5:00 p.m.

May 3, 8:30 a.m. to 5:00 p.m.

May 4, 8:30 a.m. to 12:00 noon.

WEDNESDAY MORNING

May 2, 1956

10:30—Meeting of State Officers, Executive Committee, County Auxiliary President and State Convention Chairman, Roswell Chamber of Commerce.

2:30—Meeting, House of Delegates, Roswell Chamber of Commerce.

7:00—Dinner in home of Doctor and Mrs. Ira J. Marshall.

THURSDAY MORNING

May 3, 1956

10:00-11:00—Coffee—Roswell Museum, Eleventh Street at Main. Host: Mrs. Aaron Margulis, President, Auxiliary to the New Mexico Medical Society.

Scheduled Tours to Eastern New Mexico Medical Center and St. Mary's Hospital.

7:00—Dinner-Dance — Walker Air Force Base, Officers Club (dress optional).

FRIDAY MORNING

May 4, 1956

10:00—General Meeting—Roswell Chamber of Commerce.

1:00—Luncheon—La Camina Steak House. Speaker — Mrs. E. Arthur Underwood, Vancouver, Washington, Second Vice President, Woman's Auxiliary to A.M.A. Subject — "Active Leadership in Community Health and Community Mental Health."

OFFICERS OF THE CHAVES COUNTY MEDICAL SOCIETY

President.....E. W. Lander, M.D.
Vice President.....John S. Moore, M.D.
Secretary-Treasurer.....Pierre Salmon, M.D.

CONVENTION COMMITTEES

General Chairman.....	E. W. Lander, M.D.
Entertainment.....	I. J. Marshall, M.D.
Finance.....	Pierre Salmon, M.D.
Exhibits.....	R. R. Boice, M.D.
Reservations.....	Richard Waggoner, M.D.
Publicity.....	Emmit Jennings, M.D.
Registration.....	Frank A. English, M.D.
Auxiliary Program Chairman.....	Mrs. I. J. Marshall

TECHNICAL EXHIBITS

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Alcon Laboratories, Inc.....	4
A. H. Robins Co., Inc.....	5

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Coca-Cola	7	New Mexico Physicians' Service.....	23
Parke, Davis and Company.....	8	Southwestern Surgical Supply.....	24
Eaton Laboratories.....	10	Esco-Bio Chemicals.....	25
Lederle Laboratories.....	11	G. D. Searle and Company.....	26
Upjohn Company.....	12	Ciba Pharmaceutical Products.....	27
Ayerst Laboratories.....	13	Eli Lilly.....	28
E. R. Squibb & Co.....	14	Desitin Chemical Company.....	29
Audio-Digest	15	Mead Johnson & Company.....	30
Sharp-Dohme	16	Pfizer Laboratories.....	31
Abbott Laboratories.....	20	A. S. Aloe.....	32
M & R Laboratories.....	21	Sandoz Pharmaceuticals.....	33



Forrest H. Adams

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Dana M. Street

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Conrad G. Collins



Vernon E. Martens

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R. D. Moreton

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Carleton B. Chapman



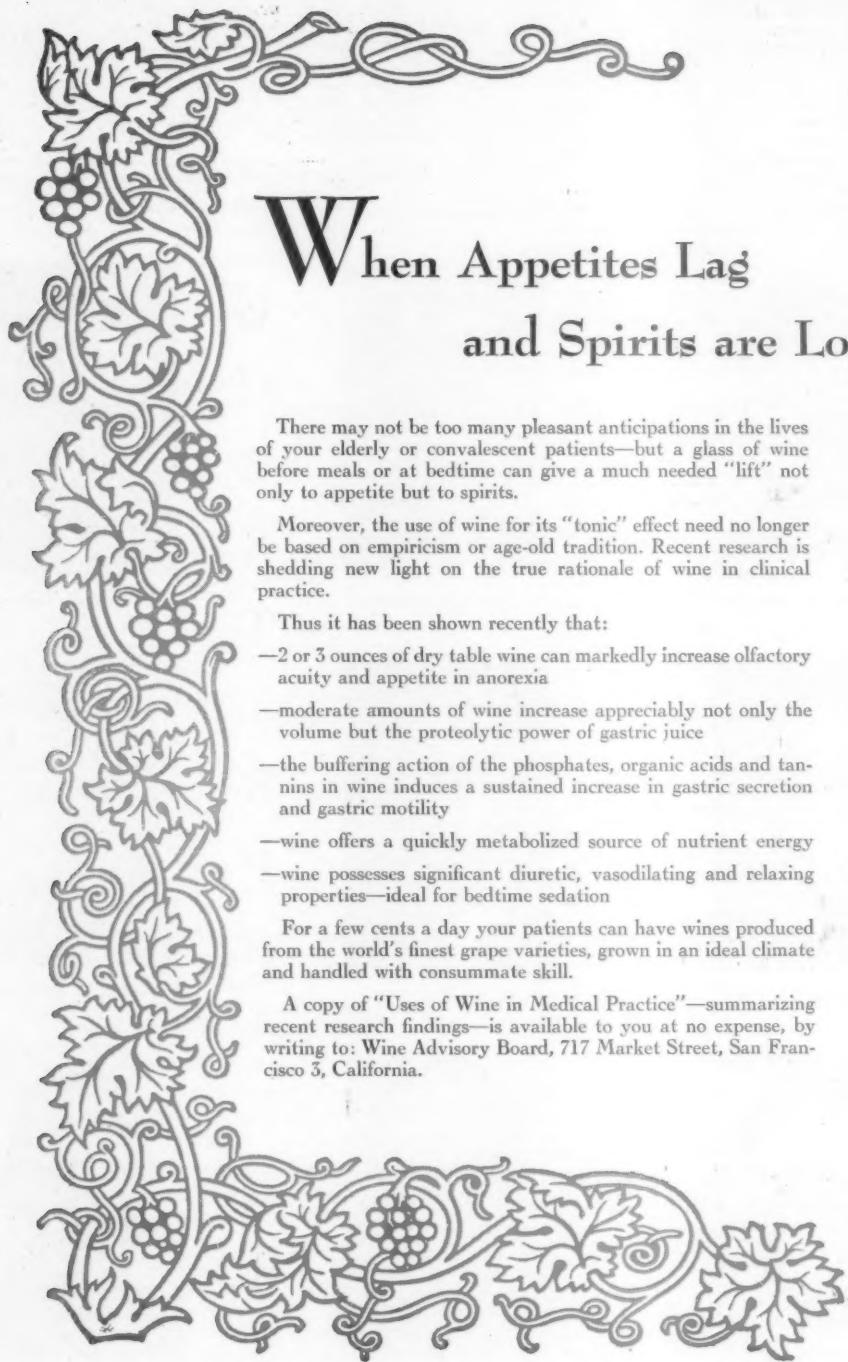
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John H. Moyer



Ian MacDonald



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- the buffering action of the phosphates, organic acids and tannins in wine induces a sustained increase in gastric secretion and gastric motility
- wine offers a quickly metabolized source of nutrient energy
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Obituary

LEE MONROE MILES

Lee Monroe Miles, M.D., Albuquerque, died on January 13, 1956, as a result of a cerebrovascular accident.

Dr. Miles was 69 and a graduate of Rush Medical College in 1915. He taught physiology at Marquette Medical School from 1915 to 1916. From 1916 to 1920 he was a medical missionary in Tehchow, China, and from 1922 to 1926 he was an Associate Professor of Obstetrics and Gynecology at Peking University Medical College, China.

Dr. Miles came to New Mexico in 1931 and joined the staff of the Lovelace Clinic in Albuquerque and became Chief of the Department of Obstetrics and Gynecology.

He was a founder of the American Academy of Obstetrics and Gynecology, a fellow of the American College of Surgeons, a member of the International College of Surgeons, a diplomate of the American Board of Obstetrics and Gynecology, a charter member of the Southwest Obstetrics and Gynecology Society, a member of the Bernalillo County Medical Society, the New Mexico Medical Society, and the American Medical Association.

He is survived by his wife and four children.

Dr. Miles was an energetic, determined, and yet compassionate man and was greatly admired by his friends and associates for his enthusiasm, good humor, and untiring efforts on behalf of his department and patients. The spark and warmth of his personality could not help but leave a cherished mark upon the hearts and minds of all who knew him.

Wyoming



OFFICIAL CALL

To the Officers, Delegates, Committeemen and Members of the Wyoming State Medical Society, Greetings:

The Fifty-Third Annual Meeting of the Wyoming State Medical Society will be held at Jackson Lake Lodge, Moran, Wyoming, Thursday to Sunday, June 28, 29, 30, July 1, 1956.

The House of Delegates will convene at 2:20 p.m. Friday, June 29, as shown in the program, and subsequently as ordered by it.

The General Scientific Assembly will convene at 8:30 a.m., Friday, June 29, and subsequently according to the program of the Scientific Program Committee.

RUSSELL I. WILLIAMS, M.D.,
President.

Attest:

ARTHUR R. ABBEY,
Executive Secretary
Cheyenne, Wyoming,
February 24, 1956.



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AMENDMENTS TO THIS CONSTITUTION OF
THE WYOMING STATE MEDICAL SOCIETY

Composition of the Association

Article IV. Section 3 — Delegates. Delegates shall be those members of the Association who register at the annual session.

Article V.—House of Delegates. The House of Delegates shall be the legislative body of the Association, and shall consist of the members of the Association who register at the annual session.

Article XII.—Referendum.

Section 1. The House of Delegates may, by a two-thirds vote of the members present, submit any question before it to a general referendum. Such question shall be submitted to the members of the Association who may vote by mail or in person, and if the members voting shall comprise a majority of all the members of the Association, a majority of such vote shall determine the question and be binding on the House of Delegates.

Section 2. To be deleted.

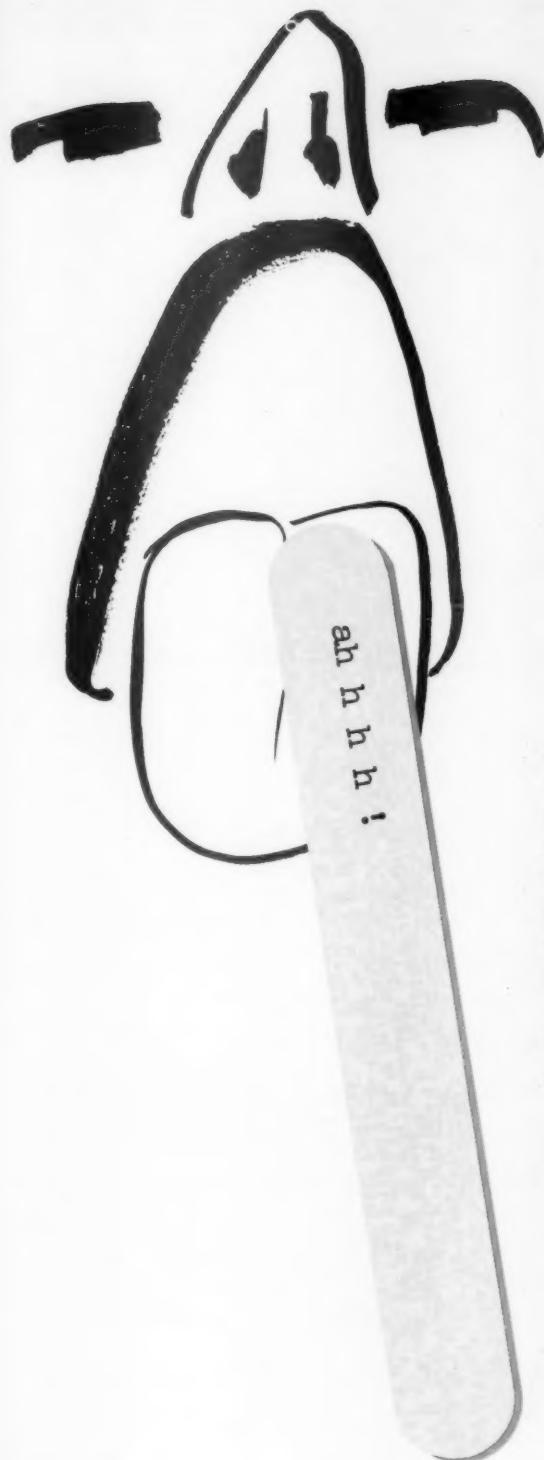
Article X.—Officers. Section 1. The officers of the Wyoming State Medical Association shall be a President, a President-Elect, who shall be President after the next Annual Meeting following his election, a Secretary and a Treasurer.

There shall be a division of the State into Districts, each District to consist of the county or counties represented by the twelve County or District Medical Societies. Each component Medical Society will elect a Councilor to serve one year; a second group of four component Medical Societies will each elect a Councilor to serve for two years; a third group of four component Medical Societies will each elect a Councilor to serve for three years. Upon termination of the term of office of these elected Councilors (four will terminate each year), the corresponding component Medical Society will replace him with another Councilor. Thus, each Councilor will serve for three years only. In case of resignation or death of a Councilor, the component Medical Society which he represents shall replace him with another member to serve only for the duration of the term of the Councilor who has ceased to serve. Thus, each year four new Councilors will be elected. The Councilors will have an Executive Committee which will consist of the President, President-Elect and Secretary of the Wyoming State Medical Society and any three other Councilors. This committee will serve as the Executive body for the Councilors. A quorum will consist of one of the elected officers of the State Society and five of the elected Councilors. The groups will be divided as follows:

Group 1—Laramie, Fremont; Northwest, Converse.

Group 2—Sheridan, Carbon; Uinta, Albany.

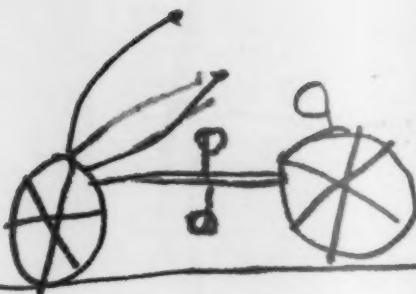
Group 3—Natrona, Sweetwater; Northwest, Goshen.



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Colorado Component Societies

LARIMER COUNTY

The regular meeting of the Larimer County Medical Society was held in Fort Collins March 7. After dinner Dr. William Rettberg presented a paper on "Malignant Diseases of the Blood."

W. S. ABBEY, Secretary.

Obituaries

CLINTON ENOS

Dr. Enos died February 2, 1956, after a long illness. He was born in 1867 at Marine, Illinois, and received his M.D. degree in 1891 from Hahneman Medical College in Chicago.

He established his practice in Denver in 1904, having come to Brighton in 1895. Dr. Enos retired in 1951 and was honored by the Colorado State Medical Society for fifty years of service in 1954.

Survivors include two nephews and two nieces in Denver.

SHERMAN WILLIAMS

Dr. Williams died February 17, 1956, after a long illness. He was born in Arkansas in 1873 and attended State Normal School in Texas, then Columbia University, and received his M.D. from Georgetown University.

Dr. Williams was honored by the Colorado State Medical Society for fifty years of service and received the golden jubilee citation from Georgetown University.

He was a member of the staff of St. Luke's, Children's and Mercy Hospitals until his retirement in 1954. He had served as Coroner of the City and County of Denver and as President of the State Board of Health. He was a member of the American Medical Association and Colorado State Medical Society.

Survivors are his wife, Ethel, of 740 Emerson Street, and two daughters.

Medical School Notes



UROLOGIC PROBLEMS IN GENERAL PRACTICE

A one-and-one-half day postgraduate course on Urologic Problems in General Practice will be offered at the University of Colorado School of Medicine on Friday and Saturday, April 20 and 21, 1956.

It is designed to review in a practical manner the phases of urology commonly encountered by the general practitioner. Recent developments

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Literature and information upon request

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* Krantz, J. C., Jr., and Carr, C. J., *The Pharmacologic Principles of Medical Practice*, ed. 3, Baltimore, The Williams and Wilkins Company, 1954, p. 998.

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in the field will be discussed when appropriate to the scope of the course.

THE MANAGEMENT OF DIABETES

A two-and-one-half day postgraduate course on The Management of Diabetes will be offered at the University of Colorado School of Medicine on May 17, 18, and 19, 1956.

Designed for practicing physicians, the course will offer a review of basic knowledge of the disease and will orient the physician to the newer developments in the field, stressing the practical applications. Three guest clinicians will assist the medical school faculty in the presentation of this course:

Dr. Arthur R. Colwell, Professor and Chairman of the Department of Medicine at Northwestern University Medical School, will discuss "The Clinical Course of Diabetes" and "The Therapeutic Applications of Available Insulins." **Dr. Henry T. Ricketts**, Professor of Medicine at the University of Chicago, will discuss "Theories of the Pathogenesis of Degenerative Vascular Complications" and "Initiation and Importance of Diabetic Control." **Dr. Howard F. Root**, Physician-in-Chief of the New England Deaconess Hospital of Boston, will discuss "The Prevention and Management of Diabetic Acidosis" and "Diabetic Triopathy."

In conjunction with the postgraduate course, a dinner meeting will be held jointly by the Colorado Diabetes Association and the Colorado Society of Internal Medicine on Thursday evening, May 17. Dr. Arthur Colwell will be the dinner speaker.

PATHOPHYSIOLOGY OF HEART DISEASE Applied Medical Science

This course, covering clinical and fundamental aspects of Pathophysiology of Heart Disease, started on April 5, at 7:30 p.m., in Room M-322. The lecture sessions usually lasted one hour, followed by discussions and questions. Graduate credit will be granted in Applied Medical Science, "Medicine 640," for one quarter credit hour upon proper registration. For additional information consult either Dr. Eisele or Dr. Holmes.

4-5, Normal Cardiac and Cardiopulmonary Reflexes, Dr. Maaske; 4-12, Pathophysiology of Various Congenital Cardiac Abnormalities, Dr. Blount; 4-19, Immunity and Rheumatic Fever, Dr. Aikawa; 4-26, Hemodynamic Changes Secondary to Acquired Valvular Heart Disease, Dr. Blount; 5-3, Pathophysiology of Cor pulmonale, Dr. Filley; 5-10, Influence of Anxiety on the Cardiovascular System, Dr. Margolin; 5-17, Pathogenesis of Essential Hypertension, Dr. E. Huffman; 5-24, The Coronary Circulation, Dr. M. Hoffman; 5-31, Blood Coagulation, Dr. von Kaulla; 6-7, Pathogenesis of Congestive Heart Failure, Dr. McCord.

For further information regarding these courses write Office of Postgraduate Medical Education, 4200 East Ninth Avenue, Denver 20, Colorado.

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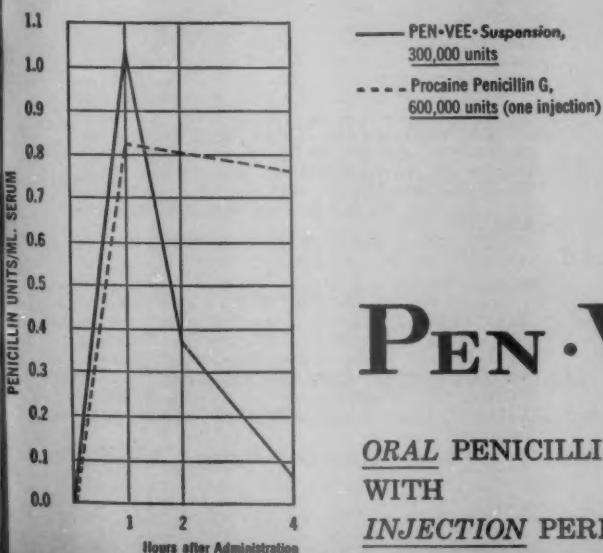
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The Book Corner



Book Reviews

Pathology Seminars: Haukohl and Anderson. C. V. Mosby Co., 1955. Price: \$10.00.

This is an illustrated transcript of Pathology Seminars conducted at Marquette University by Lauren V. Ackerman, Arthur C. Allen, Colonel J. E. Ash, Arthur Purdy Stout, and Rupert A. Willis.

This series includes tumors, skin pathology, and tumors of the nose and throat.

This type of "slide seminar" has been widely employed as a practical and effective form of postgraduate education in Pathology.

The present volume is interesting to read, and valuable as a reference. The illustrations are excellent.

WILLIAM C. BLACK, M.D.

Bickman-Calander Surgery of the Alimentary Tract: By Richard T. Shackelford, M.D., Assistant Professor of Surgery, assisted by Hammond J. Dugan, M.D., Assistant in Surgery Johns Hopkins University School of Medicine, Baltimore. Vols. 1, 2 and 3. 2,575 pages with 1,705 illustrations, 1955. W. B. Saunders Company, Philadelphia and London. Price: \$60.00.

These three volumes covering surgery of the alimentary tract are the finest ever seen by this reviewer. The material is organized and indexed so that it is very easy to find the exact section which is sought. Each volume contains the full index for the set, admittedly an excellent feature.

The author has written most of the material so that the style and organization is maintained throughout. He graciously acknowledges the borrowed illustrations and material that he has used and is to be complimented on selecting truly authoritative authors for a source. The bibliography in each section, which is credited to the co-author, is compact and always helpful. In each instance the operative procedure of choice is given with the reasons why it is preferred. Where alternative procedures exist they are described. In many cases this includes several and the author's reasoning on choice of procedure and time of application represent some of the best educational reading in current surgical literature. Each procedure is accompanied by the essential facts of the pre and post-operative care.

There seems to be very little opportunity for improvement on this set of books from the standpoint of clarifying the subject of surgery of the alimentary tract. Dr. Shackelford's books would become an invaluable daily help to any practicing surgeon and an unerring and time-conserving guide for the surgical resident and student.

MARVIN E. JOHNSON, M.D.

Doctors' Offices and Clinics, Medical and Dental:
By Paul Hayden Kirk and Eugene D. Sternberg.

The rush of business from the older downtown areas to the newer suburbs has brought about several types of buildings which hardly existed ten years ago. Among these is the doctors' and dentists' clinic building, a blend of residential and commercial design, usually

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This new book, in addition to covering questions of group practice, association with other doctors, and comparative costs of renting versus building adequate quarters for efficient practice, presents photographs of a number of handsome clinic buildings, together with floor plans, specifications of construction, and costs. Young men entering the profession and certainly any doctor contemplating building an office should see and read this valuable book.

JEROME K. NAGEL, Architect.

Clinical Biochemistry: By A. Cantarow and M. Trumper. Fifth edition. W. B. Saunders Co., Philadelphia and London, 1955.

This book has been largely rewritten for this edition. New material on liver function, kidney

function, plasma protein abnormalities, nucleic and uric acid metabolism, porphyrins, diet, iodine metabolism, fatty liver, acid-base balance, and the endocrines, is included. It is conservatively written and both sides are given when agreement is not yet established. It apparently went to press before Du Vigneaud completed his work on the posterior pituitary hormones, but in general the book is modern and up to date. For instance, on page 251 alkaline phosphatase is said to be of little use to differentiate types of jaundice; on page 206 the abnormal hemoglobins are discussed. Chapter XIX might be read with profit by those who still use the Ewald test meal and gastric analysis.

One could quibble with a statement such as that on page 633 that hypoglycorrachia is invariably in tuberculous meningitis, but one must applaud such as page 543 where again BSP is



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diagnostic, prognostic and progress decisions.

The text is a valuable addition to the books on the uses, interpretation and pitfalls of clinical biochemistry.

RUSSEL G. BOWMAN, Ph.D.,
St. Luke's Hospital, Denver.

pulmonary tuberculosis produces the condition known as bronchiectasis. His evidence further indicates that non-tuberculous bronchiectasis is a developmental disease of the lungs and that once formed does not increase in extent of lung involvement.

H. DUMONT CLARK, M.D.

**The Behavior of Pulmonary Tuberculous Lesions
(A Pathological Study)** By E. M. Medlar.

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Chapter III on Necropsy Studies of Human Tuberculosis shows again the prevalence of pulmonary tuberculosis in apparently healthy individuals who died suddenly or unexpectedly. In addition, most of the basic information on the pathogenesis of tuberculosis here is given briefly and succinctly.

In the opinion of the reviewer, Dr. Medlar's major contributions to pathological literature are contained in the chapters on "Bronchial Lesions in Tuberculosis" and "Tuberculosis and Bronchiectasis." Medlar does not believe that

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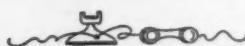
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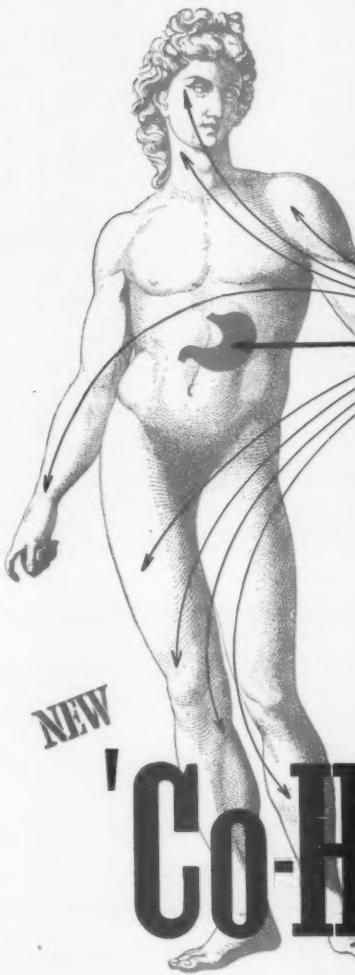
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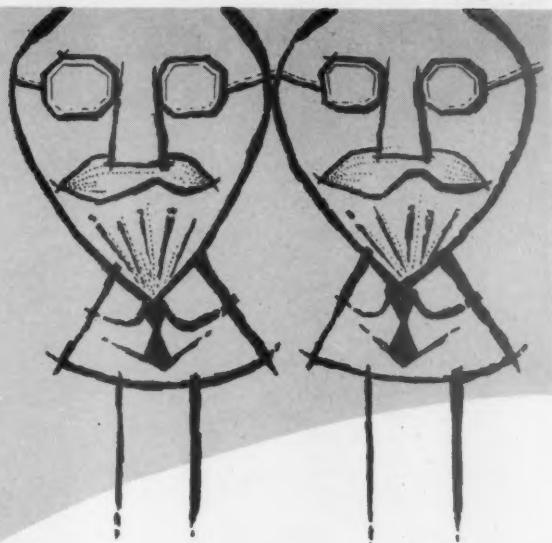
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GYNECOLOGY—Office & Operative Gynecology, Two Weeks, April 16, June 18. Vaginal Approach to Pelvic Surgery, One Week, April 30, June 11.

OBSTETRICS—General & Surgical Obstetrics, Two Weeks, May 7.

MEDICINE—Internal Medicine, Two Weeks, May 7. Electrocardiography & Heart Disease, Two Weeks Basic Course, July 9. Gastroscopy & Gastroenterology, Two Weeks, September 10. Dermatology, Two Weeks, May 7.

RADIOLOGY—Diagnostic X-Ray, Two Weeks, April 30, September 17. Clinical Uses of Radioisotopes, Two Weeks, May 7.

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1. Bollet, A. J., Black, R., and Bunim, J. J.: *J.A.M.A.* 158: 439, June 11, 1955.

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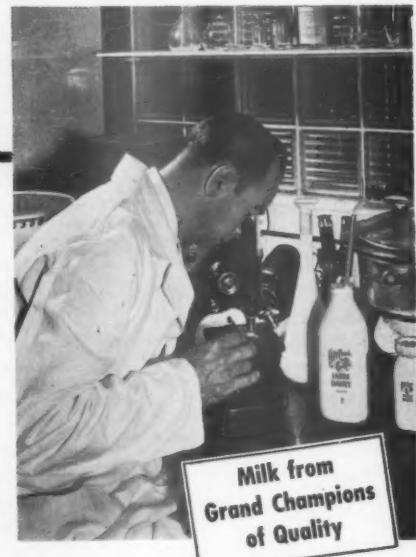
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